

Represents Superior



WILLIAM H. CODY
Manufacturers representative in Dallas, Texas, who will handle the products of the Superior Valve & Fittings Co. in that territory.

Ruthenburg Sounds Selling Keynote at Servel Convention

(Concluded from Page 1, Column 4)
business in the past, this country still would be an unpopulated wilderness.

"If there had been no selling, there would have been no business," he went on. "The great industries of this country have been built by people who sell. The future of America depends upon the continuance of the salesman's function."

"Since selling is so important, better salesmanship is needed more than ever before, during a period like the present, when we are emerging from the sudden depression which overtook us years ago," Mr. Ruthenburg continued. "The future is unpredictable, but the outlook is far from dark."

The Servel president compared the present business situation to that of the motorist starting out over an unfamiliar roadway.

"Safely driven business machines will move forward, with engines turned for quick acceleration and high speed, so that maximum progress can be made as long as the road is open and the pavement reasonably smooth," he said.

"We must be sure that no brake is dragging, and that our engine is developing maximum power. We must drive ahead with our foot on the accelerator, covering as much ground as may be possible over the open road lying immediately ahead."

Charles G. Groff, board chairman of Servel, stressed the importance of creative selling, urging salesmen to conduct themselves so that the company will be respected for its outstanding fairness.

"We do not want to make money out of men, but rather out of the success of men," he said.

Service medals for "continuous faithful service" covering 15, 10, five, and two-year periods, were presented to 38 sales officials by F. E. Sellman, vice president, who initiated the custom several years ago. Recipients included regional and district managers and sales representatives from all parts of the country.

Other Servel officials who took part in the conference included George S. Jones, vice president and general sales manager; A. E. Lee, assistant vice president; and William Reynolds, advertising manager.

Nema Reports September Sales of 72,050 Units

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for the similar period of last year. This year's sales amount to 1,285,900 units, compared with 2,265,500 for the first nine months of 1937.

Sales by members of National Electrical Manufacturers Association, reported to Nema headquarters by 17 cooperating companies, totaled 72,050 units during September, as compared with 87,842 during the corresponding period of 1937.

Nine-month total of Nema companies' sales amounted to 1,221,871 units this year, against 2,115,071 during the same period of 1937.

New Price Policy on Electric Refrigerators Suggested in N. Y.

(Concluded from Page 1, Column 5)
"wholesale" sales made by distributors at indicated list prices and the dealers' prices be distributed to participating dealers, in proportion to direct sales made by them.

In submitting his recommendations, Mr. Jaffe made it clear that they did not necessarily call for reduction in manufacturers' prices nor in distributors' mark-ups, but that the intention was rather to provide for the set-up of wholesale list prices and a strict adherence to them. At the same time he recommended promotional campaigns to be augmented by cooperation between manufacturers, distributors, dealers, and utilities.

Indicating to distributors and manufacturers that the recommendations have their complete endorsement, the dealers have petitioned manufacturers and distributors to complete and place in effect, not later than Dec. 1, 1938, plans similar to the one offered by Consolidated Edison as distributor of the Servel gas refrigerator.

DEALERS SIGN PETITION

Signing the petition are 27 dealers, each representing cooperating retailers in an Edison district in New York City. Total number of dealers represented is said to exceed 700.

Consolidated Edison's selling plan on Electrolux units, which will become effective on Dec. 1, provides for separate dealer discounts for "retail" and "wholesale" sales, and lists a schedule of trade-in allowances for used gas refrigerators turned in on the purchase of new models.

DEALER DISCOUNT 25%

The plan provides for dealer discounts of 25% from the list price. "Wholesale sales" are considered those sold to the landlord for installation in premises of more than six apartments, and the plan allows a discount of 20% from the list price on the basis of "deliver sidewalk customer's premises."

"Installed and connected 'wholesale sales'" can be made in tenanted buildings, \$6 being added to the wholesale "delivered only cash price" to cover installation and connection by an approved connecting plumber.

WHAT ARE RETAIL SALES?

All sales not "wholesale" are classed as "retail," and list prices include free installation. To determine the "delivered only cash price" on retail sales, \$7 is to be deducted from the list price on single installations, and \$6 for a multiple installation.

Differential between "dealer cost" and the "delivered only cash price" on sales made directly by Consolidated Edison are to be pooled and divided among cooperating dealers proportionately to the number of Electrolux units that such dealers have sold, wholesale and retail.

Revised Electrolux list price, to become effective Dec. 1, follows:

Model No.	Dealer Price Delivered Only	Retail Price Delivered and Connected	Wholesale Price Delivered Only
300A	\$ 82.50	\$110.00	\$ 88.00
410	73.20	97.50	78.00
500A	82.50	110.00	88.00
500	123.00	164.00
600A	126.00	168.00	134.40
600	141.00	188.00
800A	150.00	200.00	160.00
800	165.00	220.00
1100	234.00	312.00

Financing of Electrolux units may be had under the National City Bank cooperative plan. Separate plans are available for retail and wholesale sales. All financing contracts must include a charge of \$3 per year for parts replacement service for each year of the contract, less the first year of free warranty.

Old Electrolux units may be traded for new gas refrigerators on the following basis:

Boxes five years old or less—20% trade-in value of the "delivered only cash price" of the new unit.

Boxes five to six years old—19% trade-in value of the "delivered only cash price."

Boxes six to seven years old—18%; seven to eight years old—17%; eight to nine years old—16%; over nine years old—15%.

'39 Deluxe Model



One of Crosley's new deluxe models, shown here, has an 18-point cold control, two-position sliding shelf, and a pottery set.

Crosley Adds 3 Deluxe Units To 1939 Line

(Concluded from Page 1, Column 2)

All models are equipped with the Shelvador feature, built-in shelves in the door, in new and improved design, and with the Crosley "Electro-saver" hermetically sealed refrigerating unit. New-style evaporator has

a radio-type temperature control of blue Tenite, and provides 18 different temperature adjustments.

Included among other features of the new units are a two-position sliding shelf, and an "oven-proof" pottery set consisting of three colored bowls and lids, smartly designed, plus a modernistic water pitcher. Clear glass jars with close-fitting lids also are included for storing left-overs in the Shelvador section.

Crosley's "Quick Release" ice cube tray has been redesigned and improved, and is said to permit easy removal of the number of cubes wanted without disturbing the remaining ones, as well as to deliver full-size square cubes for better appearance and greater cooling effect.

Evaporator has a fast-freezing compartment, and evaporator surfaces are smooth inside and out for easy cleaning. Aluminum trays and grids are used in the ice compartment for faster freezing.

Shelves in all three models are removable, and one hinged shelf is provided in each model for storage of tall bottles and containers. The two larger-sized models have self-sealing vegetable crispers, and a non-refrigerated storage bin is provided in the lower part of the cabinets of all models for extra supplies of bottled and canned goods.

If desired, a radio may be installed in the models in place of the storage bin. Radio equipment has been an optional feature of Crosley refrigerator models for the past two years.

Addition of the deluxe line has been made to give distributors and dealers a range of models to meet

every competitive situation, according to Lewis M. Crosley, executive vice president of Crosley Corp.

The company's present 1939 "regular" line, introduced earlier in the year, will be carried through 1939, as originally planned, Mr. Crosley said. Four models comprised the line as originally presented, their capacities ranging from 3.1 to 6.5 cu. ft., and their prices from \$99.50 to \$149.50.

'Sam' Vining on Radio With 'Sales Slants' For Dealers' Ears

(Concluded from Page 1, Column 2)
which were published serially in AIR CONDITIONING & REFRIGERATION NEWS some time ago, and which later appeared in book form.

First anecdote told by Mr. Vining on the initial program was the famous "slant" about John Philip Sousa, illustrative of the "ask-for-the-order" theme.

Commercial "plugs" were devoted to the Westinghouse electric broiler. Women listening in were offered a cook book for use with the broiler, while dealers and salesmen who heard the program and registered their reactions are to receive an autographed copy of "Sam's Selling Slants."

The program will be heard at 8:45 a.m. central standard time every Tuesday morning over Station WOWO until the conclusion of the series.

"USING NOTHING BUT VALVES Cut My Service 75%!"

DISTRIBUTORS FOR
ALLIED STORE UTILITIES CO.
Hussman-Ligonier Commercial Refrigerators - Refrigeration - Steiner Products
J. N. ROWSE
202 N. PEARL ST.
BALTIMORE, MD.
Oct. 10th, 1938.

Automatic Products Co.,
Milwaukee, Wisconsin.

Gentlemen:-

The thought occurred to me that you might be interested in my experience with A. P. Thermostatic Expansion Valves.

I have tried every valve on the market and before I standardized on A. P., I had plenty of headaches and service but I can truthfully say that since using nothing but A. P. valves, I have cut my service 75% and it is very unusual that we are called upon to change one in any reasonable length of time.

I buy all my parts from Parks & Hull and your valve with their service really makes the refrigerator business a pleasure.

Sincerely yours,

JNR:RCK.

Commercial Refrigerator Installation

By J. N. Rowse, Baltimore, Md.
Distributor for
Allied Store Utilities Co.,
Subsidiary of Hussman-Ligonier

Refrigeration Unit —

Hussman-Ligonier

Valves — Purchased Through

Parks & Hull Appliance Corp.
Baltimore, Md.

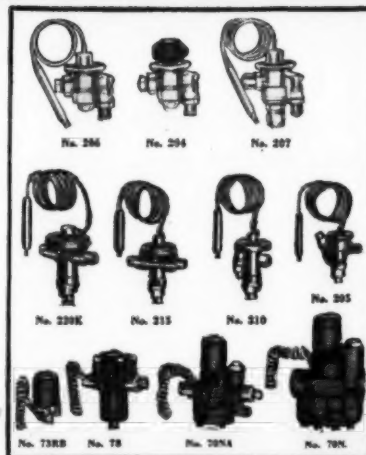
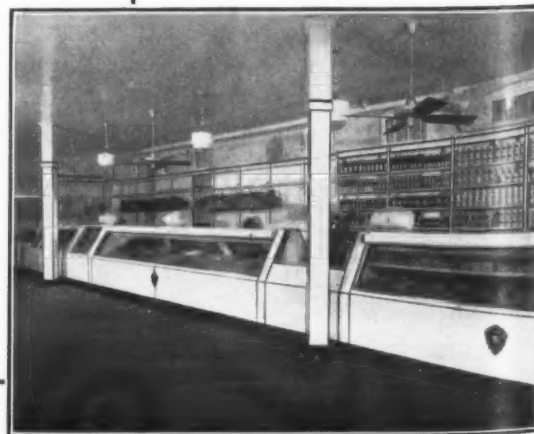
AUTOMATIC PRODUCTS COMPANY

2450 NORTH THIRTY-SECOND STREET
MILWAUKEE WISCONSIN
Export Department, 100 Varick Street, New York City

DEPENDABLE

THE BYWORD FOR A-P VALVES

Refrigeration Paris Jobbers, who recognize Quality, Stock A-P Valves. . . And Refrigeration Service Engineers who appreciate the value of Dependable Service-free Installations USE ONLY A-P VALVES, and DEMAND them for every job.



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The Newspaper of the Industry

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THE COLD CANVASS

By B. T. Umore

Circus Heat Load

This is Fan Mail Week in the Cold Canvass. First of all, a number of readers have sent us newspaper clippings in re the announcement by John Ringling North, president of Ringling Bros. and Barnum & Bailey Combined Shows, that next year the big circus would feature "plenty of color, theatrical effects, and air conditioning."

No details of the air conditioning have been forthcoming as yet. Old B.T.U. wonders if any of the engineers won't have a lot of fun figuring out the potential heat load in a tent filled with thousands of perspiring human beings, plus a menagerie of animals!

Sugar Crick Again

Next, the piece which appeared here on the Sugar Crick sages drew some letters from some of Adv. Mgr. "Zeke" Carrithers' friends. Humorist Don Herold, for example, wrote:

I'm tickled by the paragraph about us in AIR CONDITIONING & REFRIGERATION NEWS. Best wishes.

DON

And then came this one, shedding further light on Herold, Holman, et al.

General Box Co.
500 N. Dearborn St.
Chicago, Ill.

Advertising Manager:

Ed Marshall, manager of our Cincinnati office, has sent Phil and me a clipping of the current column in your publication, Nov. 2 issue, having to do with the Sugar Crick story. Ed was unfortunate in his bringing up. He went to Miami. The result is I think he is a little jealous because he did not attend Wabash. He says, "This sounds like old home week in Freeport."

I thought you might like to correct your column writer on a few of his statements. One correction is, of course, that Meredith Nicholson is not related to Kenyon though they have always been very good friends.

About the screwballs who draw the cartoons, the article was pretty close to the facts. It seems that all these boys went to New York after they graduated from Wabash, lived around in garrets, and drew cartoons until they made enough money to go back home where they could live in comfort and peace.

The editors of The Saturday Evening Post, Colliers, and other publications noticed all at once that their communications were coming

(Concluded on Page 2, Column 5)

'Refrigerator Bargain Package' Story Refuted

NEW YORK CITY—E. F. Jeffe, vice president of Consolidated Edison Co. of New York, last week branded as "gossip without any foundation whatever" reports that the utility had plans under way to feature a "Bargain Package" drive on a refrigerator of 6-cu. ft. size next spring at a price around \$90.

Reports as to the proposed promotion had arisen as a result of a meeting which Mr. Jeffe was said to have had recently with distributor representatives, in which such a plan had been discussed. From this start, rumors had jumped off to the report that major manufacturers had refused to furnish any such unit for a "Bargain Package" campaign, and that a "private brand" box might figure in the plan.

(Concluded on Page 3, Column 4)

Philadelphia Sales Through 9 Months Were 35,822 Units

PHILADELPHIA—Sales of household electric refrigerators in the Philadelphia territory during the first nine months of this year amounted to 35,822 units, a drop of 43% as compared with the 62,525 units sold in this area during the corresponding period of 1937, according to reports made by dealers to the Electrical Association of Philadelphia.

Retail value of sales during the first nine months of this year also dropped 43% as compared with that for the similar 1937 period, totaling \$6,300,268 against \$10,905,165 last year.

Average price of units sold this year, however, showed a gain of \$2 per unit over those for the first nine months of 1937. This year's average

(Concluded on Page 2, Column 3)

Frigidaire Aims Sales Drive at Hunters

DAYTON, Ohio—In a trial campaign to promote the use of low-temperature cabinets for quick-frozen foods in the home, Frigidaire's commercial refrigeration division is advertising such cabinets in two magazines in the Sportsmen's field. The idea which is apparently behind this move is that sportsmen are more likely to have the money to purchase such cabinets, and that there is probably a special desire on their part to keep their kill for their table.

Copy in Country Life & The Sportsman and Field & Stream

(Concluded on Page 3, Column 2)

RMA Standards Ready On Ammonia & Freon

WASHINGTON, D. C.—Equipment standards recently adopted by Refrigerating Machinery Association will be published about Dec. 1, according to an announcement by RMA headquarters here.

The standards represent the first of a series planned by the association in the program of standardization which it initiated a year or so ago.

Part 1 of the RMA equipment standards deals with ammonia equipment under the following headings:

Enclosed ammonia compressors, vertical open shell and tube ammonia condensers, horizontal closed shell and tube ammonia condensers, horizontal closed ammonia shell and tube brine coolers (flooded), submerged open ammonia brine coolers, ammonia liquid receivers, ammonia mains, steel and wrought iron pipe, and cold storage room insulation.

Part 2 covers the results of the first studies of Freon equipment, with the following section headings: low pressure condensing units (accessories recommended for base units), Freon-12 condensers (terminal difference), and Freon-12 water coolers (mean temperature difference).

Stewart-Warner Meeting Now Set For Jan. 5-7

CHICAGO—Dates for Stewart-Warner Corp.'s annual convention of distributor executives have been set definitely for Jan. 5 to 7, 1939, reports John F. Ditzell, sales manager of the household appliance division.

The convention originally was scheduled for Nov. 28 to 30, but later was postponed. Both 1939 refrigerators and a new electric range line will be shown, and an attendance of 300 persons, representing 66 distributors, is expected. A new finance plan also is to be outlined at the meeting.

Westinghouse Building 15-Ton 'Package' Units

Models Are Compact and Enclosed; New Systems For Homes Offered

EAST SPRINGFIELD, Mass.—Westinghouse Electric & Mfg. Co. has added five new "packaged" self-contained air-conditioning units to its equipment for commercial establishments, and has rounded out its line of home winter air-conditioning equipment through addition of several new models of oil, gas, and coal-fired units.

Addition of the new "packaged" units to the company's commercial air-conditioning line gives the company a range of seven models having capacities from 1 to 15 tons, with combinations up to 30 tons. Three of the units are of the central-station type, and four are designed for installation within the conditioned space.

Factory engineered and built, the new units are complete air-conditioning systems packaged in compact,

(Concluded on Page 20, Column 1)

September Conditioner Orders Stay Even

WASHINGTON, D. C.—Orders for air-conditioning systems and equipment booked by 125 manufacturers during the month of September amounted to \$3,052,460, a decrease of 5.2% as compared with \$3,220,906 for the preceding month this year, according to statistics released by Director William L. Austin of the Bureau of the Census, Department of Commerce.

This year's September total also is a drop from that reported for last September, which amounted to \$3,910,932.

Orders in the air-conditioning group alone, which covers washers,

(Concluded on Page 6, Column 2)

First Conditioner With Sterilamp Completed

DETROIT—First application in Detroit of Westinghouse Sterilamps in connection with air-conditioning equipment recently was made by Howard Electric Co., electrical contracting firm which acts as a Westinghouse industrial agent and licensed Sterilamp dealer, when it installed 12 of the 30-inch Sterilamps in an Airtemp winter conditioning unit in the home of Herbert B. Trix, president of American Injector Co.

This installation, costing close to \$300, included 12 sterilamps, three

(Concluded on Page 6, Column 1)

Story of Quick Profits In 'Discount' Sale of Refrigerators Costs 6 Businessmen \$14,000

DETROIT—Probably the year's saddest commentary on "discount" selling of electric refrigerators is in a court case that came to light here last week, in which Fred Wist, a one-time suspender salesman, admitted that he had defrauded six Detroit business men of \$13,855 by promising them big profits through the sale of refrigerators which he said he could obtain "at a price" and sell at a "discount."

Apparently so widespread has become the "news" of refrigerator discount selling that the business men jumped at the bait eagerly, not even seeking any proof of Mr. Wist's ability to get the refrigerators—and sell them—at a discount.

Bureau Chairman



Lee Clark, Frigidaire advertising and sales promotion manager, who will become chairman of the Modern Kitchen Bureau Jan. 1, 1939. He will succeed Roger Bolin, Westinghouse Electric & Mfg. Co., chairman of the plan committee this year.

Finance Companies To Keep Short Terms

CHICAGO—Continuation of the appliance financing terms put into effect more than a year ago was approved by representatives of the diversified division of the National Association of Sales Finance Companies at their fifteenth annual convention in the Stevens hotel here last week.

Members of the group, which finances a large share of the country's installment paper, were of the opinion that terms now in effect are satisfactory. Even with improved business conditions, it was said, it would be unwise to extend the length of terms on appliance financing.

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Jobbers on West Coast Will Meet Dec. 10-11

SAN FRANCISCO—Manufacturers and representatives of manufacturers of refrigeration and air-conditioning equipment and supplies who have a cooperative jobber set-up have been invited to attend a joint meeting with Pacific Coast Refrigeration Jobbers Association to be held in the Whitcomb hotel here on Saturday, Dec. 10.

The meeting is planned as a forerunner to the first All-Industry Refrigeration and Air Conditioning Exhibition, to be held in the Stevens hotel, Chicago, Jan. 16 to 19, 1939.

Manufacturers, manufacturers' agents, and jobbers will meet at a joint luncheon at 12:30 on Dec. 10, and will hold a joint session that afternoon. Short talks by industry

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Liversidge Says Utility's Role Is To Help Dealer

'Show Dealers How, But Don't Compete' Utility Head Tells Leagues

PHILADELPHIA—Public utility companies should cooperate with dealers and distributors in pointing out the merchandising job to be done, but should not compete with them by trying to take over a part of this job, Horace P. Liversidge, president of the Philadelphia Electric Co., told the third annual conference of the International Association of Electrical Leagues here last week.

Utilities fulfill their merchandising mission most successfully when they back up the efforts of dealers, distributors, contractors, and manufacturers, Mr. Liversidge said. They hinder, rather than help these branches of the industry when they substitute competition for cooperation, he asserted.

Experience in the past 10 years has shown that the electrical industry, made up of utilities, manufacturers, contractors, distributors, and dealers, is interdependent, Mr. Liversidge declared. Adverse criticism and attacks on utilities had affected the business of other branches of the industry.

Future success, he continued, depends upon coordinated activities of

(Concluded on Page 3, Column 1)

Hartford League Plans Promotions & Rules

HARTFORD, Conn.—Hartford Electric League, an organization of dealers, distributors, and manufacturers of electrical equipment doing business in Greater Hartford and pledged to promote better living electrically through certified appliances and service, was formed here recently at a meeting of some 300 representatives of various branches of the electrical industry.

Carl E. DeLaney, formerly engaged in sales promotion work for Hartford Electric Light Co., was named managing director of the league. Orrin P. Kilbourn, head of Orkil Electric Co., General Electric distributor here, was made president.

In an address before the organization

(Concluded on Page 20, Column 5)

Tyler Introduces New Case at Convention

NILES, Mich.—Tyler Fixture Corp.'s 1939 lines of "Floodlight" display cases, "Treasure Island" fruit and vegetable display cases, and walk-in coolers were introduced to Tyler dealers and distributors from all over the country at the company's annual sales meeting held here the second week of this month.

Jerry Tyler, president of the firm, officially welcomed the distributors and dealers to the two-day convention and told them that Tyler sales in 1938 were 10% ahead of the 1937 total.

Latest addition to the complete line of Tyler food store equipment, the Floodlight display case, features a built-in lighting system designed to diffuse a flood of bright light over the entire contents of the display case and completely eliminate dark spots and shadows.

Front portion of the cabinet's porcelain enamel top operates on hinges, making it possible to raise the entire front of the top porcelain panel to provide easy access to the lighting system.

By incorporating the new lighting

(Concluded on Page 2, Column 4)

Philadelphia Dealers Sold 35,832 Refrigerators During Nine Months At Average Price of \$176

Month	1938 Units Sold	1937 Units Sold	1936 Units Sold	1938% Inc. Or Decrease Over 1937	1938 Retail Value	1937 Retail Value	1938% Inc. Or Decrease Over 1937	1938 Average Price	1937 Average Price
January	3,123	3,135	2,532	-4%	\$ 564,097	\$ 524,071	+ 8%	\$180	\$167
February	3,797	6,119	3,657	-38%	664,574	1,076,607	-39%	176	175
March	4,826	9,051	7,668	-47%	848,012	1,570,635	-46%	175	173
April	5,861	9,452	9,870	-38%	1,037,313	1,638,226	-38%	176	173
May	4,812	9,743	9,911	-51%	832,319	1,695,279	-51%	173	174
June	3,623	9,103	6,641	-61%	627,475	1,608,916	-61%	173	177
July	3,237	7,435	6,409	-57%	575,856	1,312,554	-57%	178	176
August	3,936	4,725	3,951	-17%	693,344	838,164	-17%	177	177
September	2,617	3,762	3,591	-31%	457,278	640,713	-29%	175	170
Totals	35,832	62,525	54,230	-43%	\$6,300,268	\$10,905,165	-43%	\$176	\$174

Sales By Philadelphia Electric Co.

Month	1938 Units Sold	1937 Units Sold	1936 Units Sold	1938% Inc. Or Decrease Over 1937	1938 Retail Value	1937 Retail Value	1938% Inc. Or Decrease Over 1937	1938 Average Price	1937 Average Price
January	83	96	81	-14%	\$ 13,514	\$ 18,290	-27%	\$163	\$190
February	222	191	160	+16%	41,414	36,658	+12%	186	192
March	316	457	372	-31%	58,148	87,763	-34%	184	192
April	458	809	810	-43%	86,546	157,812	-45%	189	195
May	514	892	867	-42%	100,123	177,393	-44%	194	198
June	395	850	768	-54%	79,693	172,633	-54%	200	203
July	357	623	625	-43%	71,205	128,175	-45%	199	206
August	385	500	426	-23%	78,820	102,259	-23%	204	204
September	224	288	297	-22%	45,820	57,885	-21%	204	200
Totals	2,954	4,706	4,406	-38%	\$ 575,283	\$ 938,868	-39%	\$194	\$199

Note: Utility sales approximate 8.2% of total sales.
Report covers sales in Philadelphia, Bucks, Montgomery, Delaware, and Chester counties.
Report includes sales of the following makes: Apex, Coldspot, Crosley, Frigidaire, General Electric, Hotpoint, Kelvinator, Leonard, Norge, Stewart-Warner, and Westinghouse.

'Profits' In 'Discount Sale' Latest 'Con Game' Bait

(Concluded from Page 1, Column 4)
resold—with that discount again—to equip a large apartment house. To prove the ease of operation, small sums were first taken and doubled in a flash.

Next came the request for a large sum for a really big deal. At this time was introduced an accomplice posing as a jobber, a note signed with the name of a reputable warehouse executive, and the money taken to be miraculously multiplied.

During all this time, not a refrigerator was produced. The "suckers" were convinced that buying and selling refrigerators at a discount—and a huge profit—was a common way to a fortune, so no questions were asked.

An automobile dealer, a bowling alley operator, and a butcher were among the easy prey. Taking money from one, Mr. Wist would stall the other. In the meantime, he used the funds in an attempt to beat the horse races.

Cornered for payment on the notes, he would point to the earlier profits and insist that discounts on refrigerator prices was still an easy way

to make a fine living.

Then came the crash. The horses finished out of the money, as did the bogus refrigerator discount marvel. Broke, the forged note payments due, he was forced to admit that the scheme was good only while it and the discount story lasted.

W. C. Fields maintains "You can't cheat an honest man." But you can still "discount" a lot of people.

Aerovox Corp. Moves To New Bedford, Mass.

NEW BEDFORD, Mass.—Aerovox Corp., manufacturer of condensers used for motor-starting functions in electric refrigerators and other appliances, has recently moved its manufacturing operations from Brooklyn, N. Y. to the Nashawena "B" mill here. Samuel I. Cole is president of the company.

Welcome to executives of the company recently was extended by members of the New Bedford Industrial Development Legion and business leaders at a dinner in the New Bedford hotel. Approximately 100 persons attended.

A total of about \$100,000 will be expended in moving manufacturing operations from Brooklyn.

'38 Average Price Higher Philadelphia Sales Show

(Concluded from Page 1, Column 2)
price was \$176, as compared with an average price of \$174 last year.

Sales made by Philadelphia Electric Co. only during the nine-month period amounted to 2,954 units, a drop of 38% as compared with 4,706 units in the same month of 1937. Dollar volume of sales dropped 39% as compared with similar 1937 figures, amounting to \$575,283 as against \$938,868 last year.

Average price per unit during the period also dropped this year, although the average of \$194 was still considerably higher than that for dealers and the utility combined, \$176. Average of utility sales only last year at this period was \$199.

Report to the Electrical Association covers sales in Philadelphia, Bucks, Montgomery, Delaware, and Chester counties, and includes the following makes: Apex, Coldspot, Crosley, Frigidaire, General Electric, Hotpoint, Kelvinator, Leonard, Norge, Stewart-Warner, and Westinghouse.

New York, California Lead States In Sept. Sales

States and Territories	Quantity Household Low Sides September Cumulative
Alabama	372 9,875
Arizona	96 2,752
Arkansas	180 6,329
California	7,721 79,989
Colorado	168 8,057
Connecticut	806 15,121
Delaware	217 2,301
District of Columbia	906 13,488
Florida	1,750 13,318
Georgia	476 13,576
Idaho	83 3,945
Illinois	3,738 92,008
Indiana	777 25,661
Iowa	462 20,391
Kansas	291 12,303
Kentucky	570 13,357
Louisiana	815 14,651
Maine	99 4,951
Maryland	837 14,007
Massachusetts	2,648 43,419
Michigan	2,024 45,862
Minnesota	471 27,552
Mississippi	208 5,524
Missouri	1,138 31,787
Montana	60 3,044
Nebraska	234 8,562
Nevada	45 1,216
New Hampshire	171 3,159
New Jersey	2,253 41,889
New Mexico	39 2,091
New York	13,654 146,556
North Carolina	822 19,595
North Dakota	71 2,490
Ohio	1,927 57,414
Oklahoma	444 12,523
Oregon	198 8,904
Pennsylvania	5,352 97,625
Rhode Island	172 4,238
South Carolina	290 8,250
South Dakota	90 2,657
Tennessee	747 16,177
Texas	2,243 51,890
Utah	312 6,308
Vermont	71 2,709
Virginia	570 15,831
Washington	390 17,765
West Virginia	211 9,892
Wisconsin	738 22,796
Wyoming	28 1,416
Total United States	57,985 1,085,221
Canada	2,354 38,478
Other Foreign (Incl. U. S. Possessions)	11,711 98,172
Total For World	72,050 1,221,871

Tyler Distributors See '39 Models At Meeting

(Concluded from Page 1, Column 5)
system in the 1939 cases, Tyler engineers claim to have provided increased display space within the cabinet.

The new Floodlight display cases will be available in both top display and double-duty types in two depths, one case having an outside depth of 35 inches, and other, especially adaptable for "super market" use, having a depth of 39 inches.

Top display cases will be available in lengths of eight, 10, and 12 feet, and double-duty cases in lengths of eight and 10 feet.

Tyler's 1939 walk-in coolers are termed "sectional steel clad," having galvanneal steel interiors as standard design. Wood interiors are optional with the customer, it was announced.

Finished in a hard baked-on aluminum enamel, the steel interiors are said not to pick up odors and to be easy to clean.

The Treasure Island display case, first introduced by Tyler a few months ago, is specially designed for displaying and storing fruits and vegetables.

During the business sessions of the convention, Tyler's 1939 sales campaign was explained to the distributors and dealers. Marshall J. Crull of Green Bay, Wis., presented a talk and demonstration on the selling of display cases, and his address was followed by a general discussion, with added sales tips from the floor.

Doyle Carpenter of Tyler headquarters explained and demonstrated how the new steel-interior walk-in cooler is constructed.

A discussion of the selling of reach-in units was given by Max Rosen of Buffalo and S. D. Vander Weg, Tyler sales promotion manager, presented sales points to be used in selling reach-in boxes to bakers.

Selling of the Treasure Island refrigerators was discussed by R. H. Haines of Dayton, Ohio. W. T. Reed of Bluefield, W. Va., talked on the selling of complete food store installations.

Popular feature of the entire convention was an en masse trip to the Notre Dame stadium to see the Fighting Irish down the Minnesota Gophers 19 to 0.

Inspection of the new Tyler cases was under the guidance of divisional managers R. L. Tyler, Don Thomas, Adam Becker, Paul Jackel, Richard White, and Joe Palenchar.

Tyler's 1939 advertising program includes an announcement advertisement in leading trade papers, and the addition of several magazines to Tyler's 1939 list of advertising mediums.

Special messages will be addressed to prospects in the hotel, restaurant, and bakery fields.

Winners in the Tyler "Mountain Climbers" contest were unofficially announced at the sales meeting, definite final results not having been tabulated in time for official decision.

Harry L. Hussmann, Jr. was in first place in the sales contest; J. E. DeArmond was second; George W. Syler, Detroit, third; R. H. Haines, Dayton, Ohio, fourth; Andy Pastorelli, Chicago, fifth; and M. C. Stoddard, Mason City, Iowa, sixth—last place in the money-winning bracket.

Winners of club prizes won as contributing members of the Rainer Club were: N. Anastasi, V. J. Atwood, Grady Lanier, P. M. Lederman, J. C. Pepper, G. W. Syler, Andy Pastorelli, F. T. Abbott, A. J. Peterson, F. W. Bennett, and J. C. Hoben.

Special prize for the salesman selling the largest total volume of Treasure Island produce cases was won by A. J. Johnson, with G. E. Coleman a close runner-up.

J. W. Horsman, sales manager for Tyler's San Francisco distributor, The Cyclops Refrigeration Co., was presented with the sales manager's trophy, his salesmen having turned in the largest total volume of business during the Mountain Climbers contest.

Hill Moves Store

SUMTER, S. C.—Hill Plumbing Co., which formerly operated as a General Electric appliance dealer and engaged in the plumbing business at 29 Dugan St. here, has moved its appliance business to 117 S. Main St. The plumbing business will be continued from the old location.

THE COLD CANVASS

By B. T. Umer

(Concluded from Page 1, Column 1)
from Crawfordsville. Finally the Curtis publication man wrote to Dave Gerard to find out why they had all moved to a small town in Indiana. Dave wrote him and invited him to come and see why.

The result was that he spent several days on the campus, visited Turkey Run and other beautiful spots, and went back to Philadelphia all enthusiastic about Wabash and Sugar Crick.

You can fix up your writer on Don Herold. You know the only trouble with Don was that he was unfortunate in his college affiliations. If he had gone to Wabash instead of Indiana University, he would do a better job with his "Personal Air Conditioning" and you can tell him why.

E. E. AMES

Arnold Goss and the Doorbell Pusher

Then came a gem from one of the industry's famous sales personalities, inspired by the lengthy article on the late Arnold H. Goss which appeared in the NEWS. It follows: Westinghouse Electric & Mfg. Co.

246 East Fourth St.

Mansfield, Ohio

Editor:

In your story of Arnold H. Goss there were things that carried me back to the "once upon a time" when I was pushing doorbells in Detroit.

You asked me the story about Mr. Goss, and the industry, so here goes.

During the years I punched doorbells, Mr. Goss was the only man who absolutely threw me off his property, and refused in any way to let me start telling my story. Along with oil burners I was selling electric water heaters and electric radiators.

In a search for prospects I discovered that Mr. Goss was using a very antiquated heating system in his process of conditioning his milk. His equipment was so old that our survey showed the entire total of any equipment would be paid for in absolutely one year.

With all the hopes of a young doorbell puncher tied up in one package, I made an elaborate proposal and carried it with me to Mr. Goss at his home.

The door-bell had scarcely ceased ringing until Mr. Goss stepped on the porch and told me that he never bought anything from house-to-house salesmen, and would appreciate my leaving at once and not bothering him even at his office.

Trying as hard as I could, I wasn't even able to get started on my story. He was madder'n an old hen hatching a duck egg.

As I turned to leave, I apologized by saying: "I am very sorry I disturbed you, because I thought I was calling on the Mr. Goss connected with Kelvinator."

Mr. Goss came back with: "I am the Mr. Goss of Kelvinator, what of it?"

I replied with as much innocence as I could collect: "I'm still confused, because I thought you and other Kelvinator officials made your living by asking other people to listen to sales stories in their homes."

By the look on his face, I left just in time to escape a fit of apoplexy.

At the next Kelvinator distributor's convention, Mr. Goss got up and told the audience the story I have just told you, stating that this interview brought to his mind for the first time the importance of house-to-house selling.

In his speech he made quite a story out of the interview by explaining that he later hunted me up and gave me an order.

I don't blame him for a fictional ending, because as you know, I myself wouldn't ruin a good story.

VERNON E. VINTING,
Director, Department Store Sales

MY JOBBER SAID



Yes!

I asked him if Virginia Quality Refrigerants were pure, if they were dependable, if I could always get quick service in the pinch. He said "YES."

That was a long time ago. I've been buying Virginia Quality Refrigerants from him ever since. And if you were to ask me those same questions I'd say "YES."



VIRGINIA SMELTING CO.

WEST NORFOLK, VIRGINIA

EXTRA DRY ESOTOO

V-METH-L

METHYLENE CHLORIDE

League Managers Told How Utility Can Help & Be Helped By Dealers

(Concluded from Page 1, Column 5)

all the branches, with every branch doing its own job and leaving the others free to do theirs.

Job of the public utility is to sell kilowatt hours, Mr. Liversidge said, but it can help other branches of the industry by giving them its support and showing them what kind of a job can be done.

In planning for the future, he said, the utility policy should be gauged almost entirely from the standpoint of the local unit. Local interests which have gotten together in harmonious manner and with a cooperative approach have established a basis for success, he declared.

In some communities, where some of the individual groups in the industry have not assumed their share of the group load, the utility sometimes is forced to step in. But it should step in only to show how the job should be done, and not attempt to take on the job itself, he emphasized.

Those branches of the industry which have wider consumer relations than does the utility can help the future of the industry by seeing that their relations are such as to give the consumer a favorable impression of the local utility, Mr. Liversidge pointed out.

For example, in selling appliances to a customer, the retailer also can sell the utility to the customer by his friendly attitude toward it. This, in turn, is reflected in the customer's mind, and points his attitude toward the utility.

Cooperation and understanding between all branches of the electrical industry, Mr. Liversidge concluded, are necessary ingredients for a foundation looking toward success and progress in the future.

In spite of the fact that it is America's greatest industry, housekeeping today has greater need of scientific planning and planned management than any other business or industry in the country, C. M. Ripley of General Electric Co. told another league session.

Painting a general background of the "power of a kilowatt hour," Mr. Ripley pointed out that, whereas \$10 ordinarily buys about 10 times as much of a commodity as does \$1, in the case of electricity \$10 buys about 24 times as much.

Citing figures from personal experience in his own home, he told how his electric kitchen, laundry, and furnace had saved his family about \$500 a year.

"This illustrates the principle stated 30 years ago by Hugh Chalmers, then sales manager of National Cash Register Co.," said Mr. Ripley. "He told his salesmen: 'Tell your prospects that whatever they need they must pay for, whether they buy it or not.'"

Housekeeping is America's greatest industry, but its worst engineered, he went on.

Brand Preferences Shown In Survey Among Ohio Rural Power Users

PIQUA, Ohio—Ownership of 443 electric refrigerators and 89 electric ranges was shown among customers replying to a recent questionnaire sent out by Pioneer Rural Electric Cooperative, Inc., serving 3,200 customers in Miami, Shelby, and Champaign counties.

Questionnaires asked for information regarding makes of refrigerators, ranges, water heaters, water systems, feed grinders, and milkers used. A total of 2,202 replies, or about 68%, was received.

By makes, farm customers answering the questionnaire reported as follows: Frigidaire, 119; Westinghouse, 78; Norge, 49; General Electric, 40; Crosley, 19; Kelvinator, 15; Coldspot, 14; Fairbanks-Morse, 11; Co-op (probably purchased through farm cooperative), 15. Ownership of 83 additional refrigerators was reported among 22 makes.

Electric range tabulations showed: Westinghouse, 48; Hotpoint, 8; Norge, 7; Frigidaire, 5; General Electric, 4; Monarch, 2; Electromaster, 2; Kalamazoo, 2; Co-op, 2; and nine other makes, 9.

Frigidaire Seeks To Interest Hunters

(Concluded from Page 1, Column 2)

makes an appeal to hunters to enjoy "today's bag" two months hence.

The cabinet which is shown in the copy is the Frigidaire 2-hole ice cream or frosted foods cabinet, with the regular lid top. It has 2-cu. ft. storage capacity.

Copy pictures hunters returning from a day's sport, with one inviting the other to dinner two months later.

A hint about the packaged frozen foods market is also inserted, with the housewife stating that "it also lets me keep supplies of the new frosted foods in the house."

Reindel Made District Head

DETROIT—George Reindel, Jr. has been appointed district manager here for Emerson Electric Mfg. Co., R. E. Otto, Emerson's manager of motor sales, has announced.

Even Turkeys Thrive on Air Conditioning

WELLMAN, Iowa—Five hundred thousand turkeys marketed every year by Maplecrest Turkey Farms here, first break their shells in a hatchery where temperature and humidity are carefully regulated by air-conditioning equipment built by the York Ice Machinery Corp.

During the first two months of their life, the birds are kept in confinement at definite temperatures.

So when you carve your turkey this Thanksgiving or Christmas and find it unusually plump and tender—remember, it may have been air-conditioned to suit your taste.

26 Units Sold In Month

PALMYRA, Mo.—Twenty-six electric refrigerators were sold in one month in the area covered by Missouri Rural Electric Cooperative Association of Palmyra.

Jeffe Spikes Rumor of 'Refrigerator Bargain Package' In 1939

(Concluded from Page 1, Column 1)

"We have never contemplated a promotional activity on a 6-cu. ft. automatic refrigerator at a price of \$90," Mr. Jeffe said.

"The only plan which has been formulated by this company on automatic refrigeration, which is additional to the present plans in effect, is that, as the distributor of the Electrolux gas refrigerator, we are opening the wholesale field to our cooperating dealers.

"We are establishing wholesale list prices which will permit the dealer to make a profit on such sales. . . . The profit on company sales will be pooled and will be distributed to cooperating dealers who sell Electrolux gas refrigerators proportionately to the number of sales which they themselves make."

This sales plan was outlined in detail in the Nov. 16 issue of the NEWS.

"We hope that our plans on automatic refrigeration campaigns in 1939 will embrace all types of automatic refrigeration, whether the refrigerators be gas or electrically operated," Mr. Jeffe's statement continued. "In the early part of 1939 we will have definite plans formulated for special refrigerator campaigns.

"These campaigns may take the form of trade-in allowances on non-automatic refrigerators, as was done in the past two years. We are hoping that the same plan effective for the Electrolux gas refrigerator can be made effective toward all approved automatic household refrigerators."

As a final spike to the "Bargain Package" rumor, Mr. Jeffe pointed out that the Electrolux list prices just established under its new sales plan show the 6-cu. ft. unit at \$168 in the regular model and \$188 in the deluxe model, and the 5-cu. ft. model at \$110 regular and \$164 deluxe.

"Your Graduate a Real Asset to Our Business..." says

HOLMES ELECTRIC APPLIANCE COMPANY

Tenth and Grove

Phone 4166

BOISE, IDAHO

9/7/38

GENERAL ELECTRIC
Home Appliances

GENERAL ELECTRIC
Heating and Air Conditioning

Refrigeration & Air Conditioning Institute
Administration building
2150 Lawrence Ave
Chicago, Ill.

Gentlemen:

Your letter of August 30th. to Mr. C. E. Alldred has been referred to the writer for answering in behalf of Mr. Harry E. Baker, employee of the Holmes Electric Appliance Co.

It is a great pleasure to advise you that Mr. Baker's services are very satisfactory and that he is a real asset to the store. His knowledge in so far as selling air conditioning and figuring the job seem to be very adequate. One of his outstanding abilities is that he can go and contact any type of a customer, whether he be a wealthy and popular man in the community or otherwise. This along with his knowledge of merchandising the product we consider a real asset to our business.

I can't help but feel that the training he received at your institute has enabled him to go out and do a far greater aggressive job of selling air conditioning here in Boise than any other salesman.

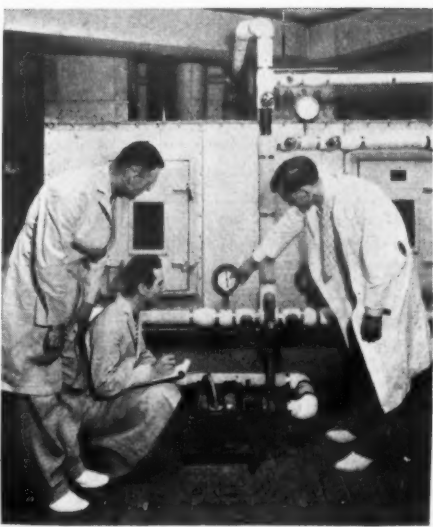
Very sincerely yours,
Holmes Electric Appliance Co.
Ernest H. Radke, Mgr.
E. A. Radke

Ernest H. Radke—Manager
Holmes Electric Appliance Co.

More Proof

OF THE JOB WE'RE DOING
FOR THE INDUSTRY...

MORE THAN
100 MANUFACTURERS
OFFICIALLY ENDORSE
AND RECOMMEND
THIS TRAINING



TRAINING IS SUPERVISED BY
A MANUFACTURER-APPOINTED
BOARD OF GOVERNORS

Trained the Way the Industry Wants Them Trained...

Yes, the Holmes Electric Appliance Company—like many other enterprising distributors, dealers and contractors throughout the country—have found R.A.C.I. graduates to be especially trained for their particular requirements.

If you are in need of a man to sell, install or service Air Conditioning and Refrigeration equipment, we suggest that you investigate the qualifications of this NEW TYPE OF CRAFTSMAN.

All R.A.C.I. graduates have had 1000 hours of home study, plus four weeks (since July 1, 1938) of intensive shop work in our new and modern laboratories in Chicago—where, working on equipment valued at more than \$100,000, they have had to dismantle, rebuild, install and service ALL TYPES of conventional Air Conditioning and Refrigeration equipment.



FREE PERSONNEL SERVICE—The individual qualifications of each R.A.C.I. graduate are recorded in a convenient form for your inspection. Our Placement Service is free to employer and graduate alike. Let us send you the records of a few of our graduates in your neighborhood.

Refrigeration & Air Conditioning Institute

2130-2158 LAWRENCE AVENUE • CHICAGO, ILLINOIS

Distributor-Dealer Doings

Greusel Co. Letters To Dealers Explain Folly of Cutting Retail Prices and Give Hints on Store Management

MILWAUKEE—To improve the merchandising ability of the average dealer, and its own market position with all dealers, Greusel Distributing Co., Crosley distributor in this area, is sending to a select list of retailers a series of five letters designed to bring to their attention various factors essential to a successful appliance selling operation.

The letters are signed by Frank W. Greusel, president of the distributorship, and are being sent out at weekly intervals, with the final mailing scheduled for Dec. 10.

On the theory that "before we can take, we must give," the company closes each of the letters with the statement: "We want you to be a better business man so that you may be a better customer of Greusel Distributing Co."

"THIS IS THE FIRST OF A NUMBER OF LETTERS," begins the series, "that we shall write you between now and the first of the year on the subject of your business."

"We are deeply and genuinely interested in your welfare, and we

"Business today is very complex—much more so than only a few years back. Many elements have been injected in the conduct of business both large and small that tend to confuse—increased federal, state, and local taxes; unemployment insurance; social security tax; additional reports to several governmental departments. The influence of organized labor is asserting itself at this time. General business conditions are not entirely satisfactory.

"In spite of apparent confusion, the home appliance business today has, in our opinion, wonderful profit possibilities.

"It does, however, require ability, ambition, training, clear thinking, and industry cooperation—and we hope in this series of letters to contribute to you something of benefit."

Second letter in the series, titled, "THE COST OF DOING BUSINESS—OVERHEAD!," reads as follows:

"In order to prosper in the home appliance retail business, income from sales must exceed the items of

state, and federal taxes, contributions to charity, association dues, auto and truck expense (delivery).

"Rent (although you may own the building), social security tax, unemployment compensation, bad debt and collection expense, depreciation on furniture, equipment, signs, etc., merchandise depreciation, maintenance, painting, cleaning, etc., miscellaneous—and for good measure, the much disputed charge of interest on your invested capital.

"You may or may not know that large department stores—well managed—have an average overhead expense to sales of 35%.

"In our next letter we will tell you something about the relationship of price cutting and excessive trade-in allowances to overhead and how it may determine either profit or loss."

"A NEW SLANT ON SALES VOLUME AND NET PROFIT," is given in the series' third letter, which reads:

"Too many dealers pay too much attention to volume of sales. Too many dealers go broke doing so."

BREAKDOWN ON COSTS

"Cut prices—excessive trade-in allowances—discounts for cash—premiums, and other inducements, bring easier and larger sales volume—but do you want this—plus—business?"

"Let's analyze the operation of a neighborhood retailer doing an annual business of \$40,000.

"Sales at list	\$40,000
"Amount of net sales	40,000
"Cost of merchandise	26,000
(average discount 35%)	14,000
"Gross profit on sales	14,000
"Overhead expense	12,000
(average 30%)	2,000
"Net profit	2,000

"Mr. Retailer may think he can make more money by securing larger volume at 5% cut in profit through trade-ins etc.—but here's what happens:

"Sales at list	\$52,632.00
"Amount of net sales	50,000.00
"Cost of merchandise	34,210.80
(average discount 35%)	15,789.20
"Gross profit on sales	15,789.20
"Overhead expense	15,789.60
(average 30%)80
"Net profit80

"Mr. Retailer may become real ambitious and set out to do a big job at a 10% cut in profits through trade-ins etc.—but here's what happens:

"Sales at list	\$66,667.00
"Amount of net sales	60,000.00
"Cost of merchandise	43,335.55
(average discount 35%)	16,664.45
"Gross profit on sales	20,000.10
"Overhead expense	3,335.65
(average 30%)	
"Net profit	3,335.65

"We have not pointed out that more or additional capital is required for you to break even or lose money. "Moral: Make sales at proper prices."

"ADDITIONAL SALES CREATED BY PROPER ADVERTISING," fourth letter in the series, points out that:

"Many dealers do not know how much they can afford to spend on advertising, so they approach this most important angle of their business with uncertainty and doubt. "While some dealers budget their

Become Vice Presidents of Gould-Farmer



A. P. RAFFERTY



LEO MEAGHER

Gould-Farmer Appoints Two Vice Presidents

SYRACUSE, N. Y.—Appointment of Leo Meagher and A. P. Rafferty as vice presidents of Gould-Farmer Co., Inc., General Electric distributor in this territory, has been announced by E. M. Farmer, president of the company.

Mr. Meagher was associated with Langdon & Hughes, former G-E distributor in Utica, N. Y., for a period of 15 years, the last five of which he spent as manager of the company's branch office here, previous to its purchase by Gould-Farmer on March 1 of this year.

Previous to this, Mr. Meagher was associated with the Bossert Corp., Utica, in the purchasing department, and also with Foamite-Childs Corp.

Mr. Rafferty has been with the Gould-Farmer organization since July 1, 1932, when the company purchased the Perry-Sherman Co. here. He had been a wholesale contact man for that organization, after having previously been assistant general manager and general manager of the Page Morris Co., which Perry-Sherman succeeded.

He joined with Central Hudson Gas & Electric Corp. as an appliance salesman early in his career, and after two and a half years was promoted to appliance sales manager of the Newburg division of the company. He remained in this post until 1929, when he went with Page-Morris Co. to open its Schenectady retail store.

Later he was made manager of the Page-Morris Co. in Pennsylvania, with headquarters at Allentown, and in 1931 came to Syracuse to help head the company's Syracuse division.

Chandler's Opens New Knoxville Store

KNOXVILLE, Tenn.—Chandler's, formerly the Electric Appliance Service Co., has opened a new retail outlet at 123 S. Gay St. The firm, which maintains headquarters at 311 Market St., is dealer in Stewart-Warner refrigerators and radios, and Standard Electric ranges and hot water heaters. Arthur R. Chandler is manager of the new store, and Gilbert E. Chandler is in charge of the service department.

Kaufman-Leonard Co. Starts 10th Year

BREMERTON, Wash.—The Kaufman-Leonard Co., organized by J. J. Kaufman and I. J. Leonard and now managed by Harold T. Lebo, is currently celebrating its tenth anniversary. The firm, located at 219 Pacific, sells Frigidaire refrigerators and ranges, and Washmaster washers.

Janesville, Wis. Dealer Has Washer Rentals

JANESVILLE, Wis.—J. M. Bostwick & Sons, department store here, has inaugurated a rental service on washers. An electric washer is delivered for either morning, afternoon, or evening use for a rental charge of 50 cents, and called for at the end of the rental period.

Some Thinking Was Done on This

Editor's Note: We are publishing the five letters which the Greusel Distributing Co. is sending out to its dealers—first, because they represent some constructive thinking and constructive action by a distributor in the matter of distributor-dealer relations; and second, because there is so much valuable information included in the letters—particularly on the folly of price-cutting—for every retailer of electrical appliances.

feel that with the years of experience that we have enjoyed we may contribute something in this series of educational letters to you that may bring additional profit to your organization.

LETTERS EXPLAINED

"We initiate the instructive campaign with the thought in mind that you are in the home appliance retail business because—

"... you have selected this field as your life's work—

"... you are willing to invest your total capital assets—

"... you expect profitable results from your efforts—

"... you feel that you are contributing something to society and particularly to the comfort of the American housewife and home life generally.

expense. No matter how large or small a business may be there must be a proper relationship between these two items.

AVERAGE COSTS GIVEN

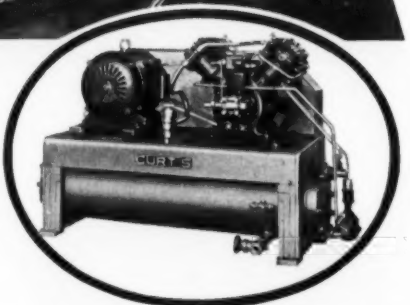
"Expressed in percentages, the average cost of doing business is 30%, ranging from 25% to 35% depending upon the type of operation conducted. Certain combinations of retail items lend themselves to low cost operation, but all dealers are not fortunate enough to enjoy this low overhead, so 30% may be accepted as average.

"This expense is made up of: "Salaries (owners), salaries (employees), advertising, sales promotions, insurance (all kinds), stationery and office supplies, heat, light, and power, telephone and telegraph, postage expense, local,

Why Curtis is the Extra Value Line

The Complete CURTIS 20-Acre Plant

You will be interested in this series of advertisements which will present some of the many factors that enter into the design, construction and manufacture of Curtis air conditioning and refrigeration equipment. The series will show what lies behind the Curtis Condensing Unit; the facilities available at Curtis, from Engineering to Shipping Departments, which allow us to contribute the extra value responsible for the high efficiency and trouble-free performance of every Curtis Unit.



The complete Curtis plant covering 20 acres, its modern equipment and latest production methods used, are factors responsible for the continued growth and success of the Curtis Company for the last 84 years.



"Builders of Condensing Units Since 1922"

CURTIS REFRIGERATING MACHINE CO., 1912 Kienlen Ave., St. Louis, Mo.
Division of Curtis Manufacturing Company

Major Appliances

New Cooperative Promotion Ideas Used In Intensive 'Flameless Cooking' Campaign Sponsored By Washington Institute

WASHINGTON, D. C.—"Flameless Cooking" via the electric range was kicked another rung or two up the ladder of public acceptance hereabouts by the boot of a \$25,000 promotional campaign concluded here last week under sponsorship of the Electric Institute of Washington.

Missing not a trick, this new promotional effort included use of newspaper advertising, direct mail, counter and window cards, product tags, a testimonial booklet, industry "pep meetings," specialized sales training, and demonstrations in dealer's stores, movie theaters, and at headquarters of the institute.

CAMPAIGN SLOGAN

Elaborating upon previous similar campaigns which have promoted electric cooking by calling it "Matchless"—Modern, Accurate, Time releasing, Clean, Healthful, Labor saving, Economical, Simple, Safe—the new drive took as its slogan, "Flameless Cooking Has Public Acceptance."

A newspaper advertising program by Potomac Electric Power Co. started off with a series of "teaser" insertions and finally led up to an advertisement featuring the campaign's emblem and slogan. Then followed a series of regular range advertisements stressing the point that "Public Acceptance" of electric ranges is proved by the fact that in and about Washington there are already 15,000 housewives cooking "the flawless way," and that 4,300 electric ranges were installed in private homes during 1937.

ADVERTISING COPY

The power company's advertising also portrayed the development of cooking methods, from the open fire of the stone age to the electric range of the modern restaurant. Each method was pictured, and under each illustration appeared a brief description of the results obtainable and the amount of labor required.

Tied in with this utility advertising were six small sketches, each illustrating one phase of the campaign claim that electric cooking is safe, cool, clean, economical, healthful, and fast.

Through the institute, the utility participated with retailers for a limited period in the cost of range advertising carried over the dealer's name. Eligibility requirements for this participation were:

ELIGIBILITY REQUIREMENTS

1. Advertising must include the campaign emblem.
2. Range advertised must carry an installed list price of not less than \$99.50, and must conform to the standards established by the institute.
3. Allowances would be paid only on space carried in approved newspapers, and when tear sheets and receipted newspaper bills have been submitted.
4. Contribution from distributors or manufacturers must not exceed 25% of the cost of the total space carried.

Two-color reprints of four of the power company's "history of the range" advertisements were mailed to 5,000 range prospects under the caption: "Someday You Too Will Use Flameless Cooking." Names of the prospects were obtained from retailer-members of the institute. Each retailer was expected to follow up this mailing by one of his own, featuring his own product and his own store.

Forty thousand of the utility's customers received, with their light bills, a broadside featuring flameless cooking and giving details of the various campaign offers. This mailing, over the signature of the institute, went only to a selected group of customers comprised principally of single-family, owner-occupied dwellings.

In order to bring the effectiveness of the drive right down to the point of sale, a "P A" or "Public Acceptance" tag was attached to every range displayed on dealers' floors.

As bait, to tempt wavering prospects into making purchases, the campaign offered a choice of a 30-day free trial, a \$15 trade-in allowance, or a six-piece set of aluminum ware. The trial offer had been used with outstanding success previously.

To provide range salesmen with more and better ammunition, and to instruct them in the most effective ways of using it, the institute prepared an instruction manual and issued one to each salesman participating in the drive. This booklet outlined the progress of electric range sales during the past five years and stressed all the advantages of electric cooking. In addition, it reviewed buying motives and selling principles, told how to increase prospect lists, described effective demonstrations, and offered sample menus for electric cooking.

In addition to other promotional aids, dealers were furnished with three-color counter cards, testimonial booklets, and broadsides describing the utensil premium. The home economics department of the power company held demonstrations in dealers' stores and also conducted four community cooking schools sponsored by suburban newspapers.

Sales and Advertising Personnel Shifts Made By Bendix

SOUTH BEND, Ind.—Several appointments and promotions in its sales and advertising departments have been announced by Bendix Home Appliances, Inc., manufacturer of home laundry equipment.

William H. Leininger, former advertising manager, has been named merchandising manager, and will concentrate on the new building field. Parker H. Ericksen, who until recently was radio sales manager for Fairbanks, Morse & Co.'s home appliance division, has been made chief of the advertising and sales promotion department of the company.

L. J. Chatten has been promoted from district sales manager to regional manager, in charge of the eastern sales division.

W. S. Reinhart has been promoted from the sales training department to district manager in charge of New England. N. F. Lawler of Detroit has been appointed manager of the sales training department, and will be responsible for training of Bendix dealers and salesmen.

C. H. Hunter has been made manager of the St. Louis territory, and C. C. Ayres has been appointed manager of the Davenport, Iowa, area. W. A. Becker has been named district manager of the Pittsburgh territory.

Detrola Corp. Introduces Electric Shaver

DETROIT—In another move to widen the variety of electrical appliances which it manufactures, Detrola Corp., maker of the Pee Wee radio, has announced introduction of the Detrola electric shaver, listing at \$7.50.

Designed for 110-volt, 60-cycle alternating current, the shaver also is available for use with 220-volt current. Among advantages claimed for the new unit are: natural-angle head, double cutting edge, simple blade construction of self-sharpening Swedish steel, and a synchro-magnetic constant high-speed motor which has no breaker points or brushes to wear out.

Electric Trains Prove Profitable Sideline In Slack Season

MILWAUKEE—A \$15,000-a-year "sideline" business in electric trains and accessories helps to ease Northern Supply Co., appliance dealership here, over the slack seasons when refrigerator and radio sales come hard, says John Westley, proprietor of the store.

This train business not only boosts his total sales volume, Mr. Westley explains, but it furnishes him with an excellent source of prospects for the radios, refrigerators, and other appliances which he sells.

Starting his model train business several years ago merely as a "filler," Mr. Westley has built it up until his store is now commonly regarded as "headquarters" for Milwaukee model railroading enthusiasts. This "sideline" is a year-around business, Mr. Westley points out, although peak months are from October to January—the pre-Christmas season. Then too, the business is a continuing one, and not just a one-purchase trade. People who have purchased trains are continually coming back to buy various accessories.

"Not only has this business proved to be valuable in itself," Mr. Westley declares, "but through it I have been able to sell more refrigerators and radios. Anyone who can afford to buy an electric train also can afford to buy a new electrical appliance of some kind, and about one out of every 12 of my train customers has turned into an appliance customer."

Kitchen Is Approach To New Homes Market Says Irving Clark

MILWAUKEE—Kitchen merchandising is the natural approach to the market which will be created by the new national residential building program, Irving W. Clark, manager of the home planning department of Westinghouse Electric & Mfg. Co., Mansfield, Ohio, said in a speech at the recent convention of the commercial section of the Wisconsin Utilities Association here.

"This market is really new to us, as in the previous building cycle of 1921 to 1929, aside from lighting, domestic electrical equipment played a very minor role," Mr. Clark stated. "Today that is not so, however, and the complete electric kitchen is our logical, natural approach to this very important market."

The speaker pointed out that authorities estimate that there is a potential demand for 8,000,000 dwelling units in this country in the next 10 years, and explained that although the actual demand will be much less, it is indicated that at least 50% of this potential demand actually will be built. With construction of modern buildings, owners of existing structures will be forced to modernize their properties or admit obsolescence and materially reduce their income per house unit, Mr. Clark added.

"It will require our closest cooperation with the entire building industry to fully capitalize on this market," Mr. Clark continued. "It

will take a horizontal type of industry organization to accomplish this tremendous task; the vertical type, individual product or industry attack, has no place in this program. The complete electric kitchen is a horizontal type of merchandising. It adapts itself to the national program."

Stating that kitchen merchandising is a real merchandising activity, producing concrete results daily in all sections of the country, Mr. Clark cited figures showing that public interest in unit kitchens has increased 1,200% in three years, and sales of kitchen equipment have risen from .7 to 2 pieces per plan submitted.

After explaining that kitchen merchandising is not new, but is simply the application to the electrical merchandising industry of principles that have been used successfully in other fields, Mr. Clark stated that other advantages of kitchen merchandising are that it brings to the public a definite plan of purchasing equipment in terms of increased service, rather than product, and that it gives to the appliance retailer "a method of presenting his product in a natural setting."

Haydon Burns Is Dealer For Laundry Equipment

JACKSONVILLE, Fla.—Haydon Burns, Inc., has been opened here as exclusive Westinghouse laundry equipment dealer.

W. Haydon Burns is president of the firm, which also handles RCA-Victor, Stewart-Warner, General Electric, Cory, and Manning-Bowman appliances.

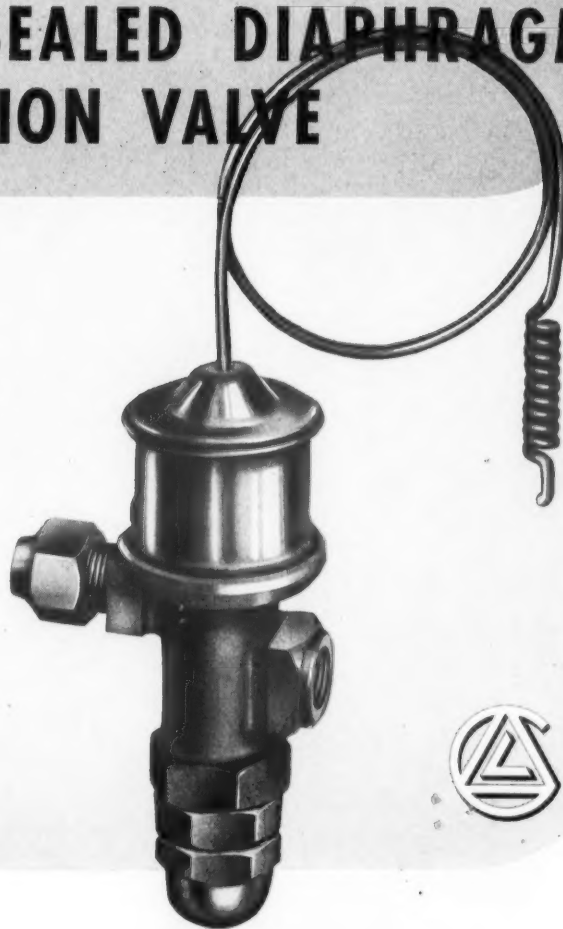
Continuous PIONEERING

The Most Recent Result of "Detroit" Policy of Continuous Pioneering is the

No. 679 ALL METAL HERMETICALLY SEALED DIAPHRAGM EXPANSION VALVE

Features

- 1 Gas charged power element having a limited operating pressure—an exclusive feature of Detroit Valves. Gas charging prevents motor overload and provides more sensitive operation.
- 2 Consistent superheat over wide pressure range due to double diaphragm construction. This makes it possible to use the valve on high pressure or low pressure applications without readjusting.
- 3 Capacities up to 1/2 ton on Freon and sulphur and 1 ton on methyl. For larger capacities use "Detroit" Valves No. 673, 781, 783, 785.



TAKE ADVANTAGE OF YOUR JOBBER'S COOPERATION



DETROIT LUBRICATOR COMPANY

General Offices: DETROIT, MICHIGAN

Division of American Radiator & Standard Sanitary Corporation
Canadian Representatives—RAILWAY AND ENGINEERING SPECIALTIES LIMITED, Montreal, Toronto, Winnipeg

Several new items will be shown at the Exhibition in Chicago—Hotel Stevens—January 16-18. • Be sure to see them at our Booths No. 88 and No. 109.

Air Conditioning

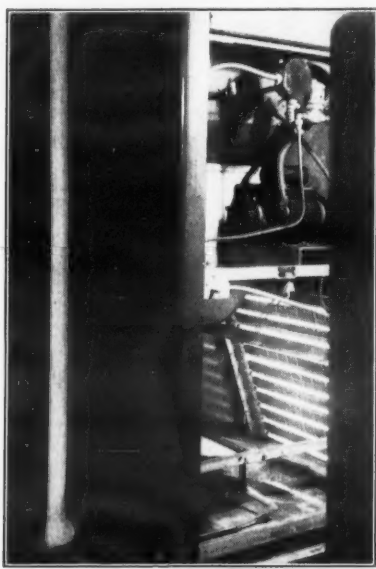
'Sterilamps' Installed In Air Conditioner

(Concluded from Page 1, Column 3)
transformers, a magnetic contactor, a circuit breaker, safety switches.

Basing his estimates on figures determined by Westinghouse, Charles Howard, owner of Howard Electric Co., decided that 12 30-inch Sterilamps would be needed to effectively destroy the bacteria in the air passing through the conditioning unit at an approximate rate of 1,800 c.f.m. Every inch of Sterilamp tubing, according to Westinghouse research engineers, will sterilize 5 cu. ft. of air in applications such as this.

The Sterilamps were installed parallel to each other and about 2½

For 'Sterile' Air



You're looking into the chamber of a central-station air-conditioning system for a residence, and those bright tubes you see are Westinghouse "Sterilamps," first installation of its kind to be made in Detroit. The Sterilamps are installed on the clean air side of the air filter, and each lamp will sterilize 150 cu. ft. of air.

inches apart along the clean air side of the filter in the heating plant, between the filter and the humidifier.

The power unit used, specially designed and constructed by Mr. Howard for this particular installation, was located on the basement wall near the conditioner. Three Sterilamp transformers were used, as each transformer will handle no more than four 30-inch lamps.

The magnetic contactor and the circuit breaker also were incorporated into this power unit. The entire assembly was placed on a separate electrical circuit. Because of the high voltage on which the lamps operate, safety switch were installed.

Controls for the system were mounted on an existing switch board, and are arranged so that the lamps burn only when the conditioning unit is in operation.

DEHYDRATED AND SEALED

LINDERME

SEAMLESS Copper TUBING

LINDERME TUBE COMPANY

CLEVELAND OHIO, U.S.A.

Self-Contained Unit Sales Gain In Conditioners Shown In Gov't Report

(Concluded from Page 1, Column 3)
filters, and humidifiers in addition to refrigerating equipment, amounted to \$1,267,009, as against \$1,292,985 in August and \$1,194,296 in September of last year.

Self-contained systems, however, were on the increase as compared with the corresponding period of 1937, this year's September total being \$270,395 as compared with \$79,652 in the same month a year ago. The month was, however, a drop from the August total of \$349,067 in this department.

Central-station systems of the human comfort type amounted to \$323,214 during the month, as compared with \$301,601 in the same month last year, and \$289,581 during August, the preceding month. Industrial systems also were on the upgrade as compared with last year, the totals being \$120,070 for this September and \$43,184 for the same month of 1937.

Refrigerating or cooling medium sold to contractors for separate installation also increased during the month, amounting to \$92,395 as against \$82,414 in the same month last year. Air washer, filter, and humidifier sales fell off.

Air washer orders amounted to \$17,088, as against \$80,925 in the month a year ago; filter orders were reported at \$39,374, as against \$42,841 last year; and humidifier orders fell off to \$79,491, as compared with \$100,689 in September, 1937.

Air-Conditioning Orders Booked In Sept. Totaled \$3,052,460, U. S. Reports

Item	Value of Orders Booked Sept., 1938	Sept., 1937	Jan.-Sept., 1938
Total	\$3,052,460	\$3,910,932	\$31,607,879
Air Conditioning Group—Total	1,267,009	1,194,296	16,542,432
Unit Systems—			
Self-contained (shipped substantially complete)....	270,395	79,652	4,836,575
Not self-contained (shipped in sections, including refrigerating or cooling medium)....	324,982	462,990	4,135,323
Central-station Systems, excluding installation if installed (including refrigerating or cooling medium sold separately or otherwise for air conditioning)*			
Human comfort	323,214	301,601	4,658,204
Industrial	120,070	43,184	537,832
Refrigerating or cooling medium sold to contractors or other distributing outlets (not manufacturing air-conditioning equipment) for air-conditioning systems, when such knowledge as to the application is available	92,395	82,414	1,089,175
Air washers, including pumps and motors and control where furnished	17,088	80,925	366,562
Air filters, not including sales of filters used with machinery other than fans	39,374	42,841	283,050
Humidifiers	79,491	100,689	635,711
Fan Group—Total	\$ 977,475	\$1,508,648	\$ 9,796,862
Fans, including bearings, pulleys, or couplings (if furnished)—			
For public and semi-public buildings.....	86,765	135,137	1,382,414
For general industrial uses	231,302	449,260	2,250,689
For mechanical draft	76,700	229,302	818,888
For jobbers stocks and unknown uses.....	150,643	67,069	985,217
Small housed and propeller fans—			
Direct connected small housed blowers with motors and control (merchandise motors).....	131,479	219,878	1,162,376
Propeller fans, direct connected and belted (for ventilation only)	263,807	338,788	2,334,598
Driving mechanism for general fan use, not reported above (manufactured or jobbed)—			
Electric motors and controllers.....	36,014	66,162	725,555
Steam engines and turbines.....	765	3,052	137,125
Unit Heater Group—Total	\$ 807,976	\$1,207,988	\$ 5,268,585
Industrial type unit heaters, including heating element and motors where furnished—			
Equipped with blower-type (centrifugal) fans....	67,079	244,560	608,108
Equipped with propeller-type fans	531,362	651,020	2,270,880
Schoolroom type unit heaters, including heating element and motors and control where furnished.	104,723	64,523	1,185,765
Indirect heating surface, not including unit heater surface (manufactured or jobbed)—			
Steel pipe coil type.....	1,524	3,229	12,714
Cast iron type	5,587	3,010	98,215
Copper or aluminum type.....	97,701	241,646	1,092,903

*Includes incidental equipment, such as temperature, motor, humidity, and electrical controls, dampers, outlets, etc., as are sold with each.

Installations For Fair Boost October Totals In Metropolitan N. Y.

NEW YORK CITY—Twenty air-conditioning installations were contracted for during October in the metropolitan New York territory served by the Consolidated Edison Co. of New York, Inc., to bring the year's total to 353 systems with a total connected load of 14,520.70 hp., according to figures compiled by the utility.

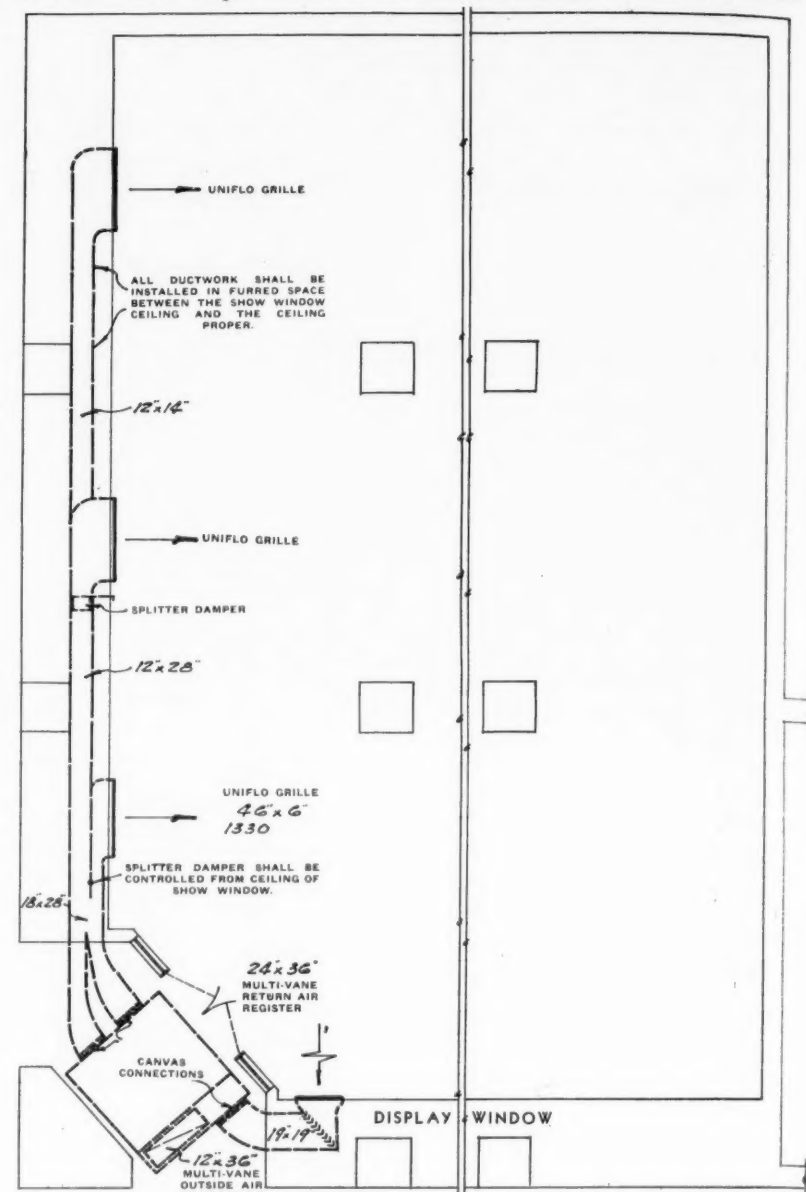
October jobs included eight installations for New York World's Fair exhibits, four retail store systems, four restaurant systems, and other single jobs in hotel guest rooms, a bank, a funeral parlor, and a private office.

For the 10-month period, installations were divided among the New York metropolitan boroughs as follows: Manhattan and the Bronx, 236 installations, totaling 9,867.58 hp.; Queens, 56 installations, totaling 3,212.26 hp.; Brooklyn, 61 installations, totaling 1,440.86 hp.

By types of application, the installations so far this year divide as follows:

Residential	7
Apartment Houses	1
Banks	13
Barber Shops	1
Beauty Parlors	2
Broadcasting Studios	2
Clubs	2
Dance Studios	2
Doctors' Offices	7
Hotel Dining Rooms	11
Hotel Guest Rooms	1
Moving Picture Studios	1
Offices	25
Office Buildings	2
Opticians	2
Restaurants	121
Showrooms	7
Department Stores	8
Retail Stores	70
Theaters	33
Funeral Parlors	4
World's Fair Exhibits	24
Miscellaneous Commercial	1
Industrial Systems	6

Where 10-Hp. Unit Was Installed In Six Hours



Installation of a 10-ton conditioner unit was made in 6 hours by the Electric Products Corp., a Pittsburgh dealer. Layout of the job is shown.

10-Hp. Conditioner Installed at Night In Six Hours So as Not To Interfere With Drug Store's Trade

PITTSBURGH—Installation of a 10-ton air-conditioning unit in a small space over the entrance of the Dow Drug Co. store at Penn Ave. and Sixth St. here, proved the solution of a difficult applications problem encountered by the Electric Products Corp.

Best location for the conditioner, which measured 48 x 132 x 13 inches was found to be on an angle in the space over the entrance. By starting at 2:00 a.m., eight workmen erected the 1,500-lb. unit in six hours, without interrupting the normal course of the store's business.

A 10-hp. Freon compressor was installed in the basement of an adjoining section of the building. Difficulty was encountered in running refrigerant lines from the compressor to the conditioner, as lines had to be run through a furred space between the floor of the drug store and the hotel lunch room below.

This space, only 42 inches high, was found to be full of pipes, old ventilating ducts, and posts, and refrigerant lines had to be bent at odd angles to circumvent these obstructions.

Outside air is supplied to the conditioner through a multi-vane register located in the ceiling of the entry, directly under the unit. Return air is taken from the building through a 36 x 24-inch multi-vane register on the right of the conditioner.

Cool air is delivered to the store through three 46 x 6-inch Uniflo grilles, connected to the conditioner by sheet metal work running through the furred space immediately over the display windows of the store. Air delivery from each grille is regulated by a hand-operated splitter damper, each grille normally handling 1,330 c.f.m.

Supply ductwork is insulated with ½-inch Celotex.

Cartoons Used In Nelson Campaign

MOLINE, Ill.—Cartoons are being used to aid advertising copy by the Herman Nelson Co. in its current campaign, designed to get across the point that an air-conditioning unit must be large enough to fit the room in which it is installed.

Based on the idea that "A man can't sleep in a cradle," the copy tells the story of conditioner applications in cartoon form, with a series of incidents portraying the ludicrous side of any situation in which small objects must serve large purposes.

Other advertisements based on the same theme show that "a cottage can't accommodate a convention"; another that "a robin can't live in a wren house." Copy below the cartoons shows why Herman Nelson units are the right size for any room.

Charles Pierce Appointed By George Dent Co.

BAY CITY, Mich.—Charles Pierce, formerly divisional representative and engineer for Kelvinator on air conditioning and automatic heating in the Cincinnati territory, has been named head of the air conditioning and heating division of the George Dent Co., Kelvinator distributor here.

A graduate of the Michigan State College engineering school, Mr. Pierce has been with Kelvinator for about five years.

During that period he has assisted in compiling an air-conditioning manual, and has been a field instructor for the manufacturer.

According to George F. Dent, head of the distributorship, Mr. Pierce will have full charge of the company's Saginaw, Mich. office, handling air conditioning and commercial.

Every facility of Servel's vast factory is available to meet your refrigeration needs, whether large or small.

SERVEL

COMMERCIAL REFRIGERATION AND AIR CONDITIONING

Write For Details to Servel, Inc., Electric Refrigeration And Air Conditioning Division, Evansville, Ind.

KRAMER

SPIRAL-FINNED SURFACE

FOR EVERY COOLING AND HEATING PURPOSE

KRAMER TRENTON AUTO RADIATOR WORKS TRENTON, N. J.

Profitable Sales Ideas

Thorough Check on Farmers In 600-Mile Area Plus Study of Crop Prices Opens Way To Rural Sales For Dealership

WALSENBURG, Colo.—Accurate knowledge of the financial condition of every farmer within a surrounding area of 600 square miles, gained by extensive personal contact and correspondence and by close study of government crop forecasts and reports, has proved worth its weight in appliance sales to Douglas and Arthur Purney, proprietors of the Purney Electrical Shop here.

Times were bad back in 1930 when the Purney brothers commenced their appliance operations in connection with a local department store, and the brothers realized that it would take some pretty smart selling to keep afloat. They evolved a plan of action based upon the estimated annual income of each farmer in the surrounding area.

COMPILE ACCURATE LIST

During their first few years as appliance merchandisers, the Purneys accumulated an accurate list of every farmer in the rich San Luis valley, in which Walsenburg is situated. They learned the approximate size of each farm, the type of crop usually planted, and the average yield realized. They discovered which plantings prospered most, and how much profit was made on each. And from this wealth of information, they compiled a visible card file of every possible prospect for the electrical equipment which they handled.

Meanwhile, the Purney Electrical Shop got along fairly well by selling to residents of Walsenburg and neighboring towns. But it wasn't the limited trade of the townspeople that the Purneys were after. Instead, the brothers wanted to crack the huge potential rural market which heretofore had been tapped only by the mail-order houses.

In 1933 the San Luis valley experienced an exceptionally good season with both crops and livestock, and the Purneys felt that the time for action was at hand. Working rapidly, the brothers sent out 1,150 announcement letters explaining their bid for rural patronage and inviting stockmen and farmers to visit their showrooms. Some routine advertising for refrigerators and radios also was included. Not much was expected from this mailing and, although a few sales were made, the company considered it merely a basic step toward further selling efforts.

APPROACH USED

For the second letter, mailed a month later, after all farmers were sure to have received their checks for the year's harvest, an entirely different approach was used.

For instance, selecting the card of a farmer named Smith from the file, the Purney office found that he had planted alfalfa and cabbage that year. Checking with current crop quotations, they then discovered that both these crops had sold at good prices.

By figuring acreage with price, therefore, the office could approximate the profit that farmer Smith had made, and could arrive at a solid basis for soliciting him on a new refrigerator or radio.

The average good crop, carefully figured, showed a profit of \$300 per planting, they found, and this is the lowest amount on which the Purney company will do credit business. The card of any farmer whose profits had, according to the Purney figures,

exceeded this amount was earmarked for mailing, and letters were sent out to these farmers in an attempt to convince them that they could afford something new in the line of electrical appliances.

Each letter opened with a congratulatory commentary on the prospect's good season. Then the prospect was told openly that his progress had been watched and that the Purney firm now felt he could amply afford modern electrical conveniences.

The fact that the firm had confidence enough in later crops to extend credit, and that it considered the prospect a good risk, gave the sales solicitation real weight.

Knowing approximately the profit made by each prospect, and how much each could reasonably afford to budget for appliances, made the composing of these sales letters easy. If the farmer's estimated profit was \$900, for example, the Purneys figured that he could pay \$10 a month on at least one appliance, and so on up the scale.

Two easy-payment plans were suggested in each letter, each one based convincingly on the prospect's income and stressing the point that it had been worked out for his benefit.

This personalized brand of salesmanship proved highly successful, and as a result this same method of rural sales solicitation has been continued year after year.

Thus, mailing only to prospects making enough profit to insure regular payments and keeping a definite control on the market, the Purneys have been able to get a surprising amount of business from rural districts. Because of the firm's close credit restrictions, practically no risk is taken.

Month by month the Purney office averages crop reports and keeps a close check on crop quotations, readying for the after-harvest sales drive. The firm is busiest between Nov. 1 and the spring months, three mailings of 1,500 letters each being made to prospects during this period in a normal year.

Selected Prospect List Used In Fall Drive

KANSAS CITY, Kan.—A 50% increase in sales for October over the corresponding month of 1937 was made by Elder & Carey Appliance Co. here as the result of an intensive campaign aimed at a hand-picked list of prospects.

Cooperative effort by company officials, who laid the groundwork, and two outside salesmen, who completed the plan, was responsible for the success of the drive.

Mr. Carey and his sales manager picked the prospects by going through the user list and selecting customers who had bought appliances 10 or 12 years ago.

Lists of these names were drawn up by localities, and each salesman proceeded with his part in the campaign by calling on a minimum average of 20 homes a day. While calling on these picked prospects, the salesmen also obtained names of neighbors, thus increasing their prospect lists.

Responsibility was placed with the salesmen for deciding whether or not a prospect would be considered a good credit risk.

Dealers Find Advertising Copy In Flood Story

(See Picture on Page 19)

NEW BEDFORD, Mass.—Sensing a sales story in the salvaging of Manuel G. Mello's refrigerator and its contents after the recent flood, Sheerin & O'Brien and Girard Furniture Co., Hotpoint dealers here, capitalized on the incident in a recent cooperative advertisement in the New Bedford Sunday Standard-Times.

Refrigerator and its contents were the only assets Mr. Mello had left, except the clothes he was wearing, after wind and water had done their worst with his property.

Muddy and battered, the refrigerator was found a mile and a quarter from where Mr. Mello's home formerly had been located. He couldn't find the house itself, or any of its other furnishings.

When he opened the refrigerator, he found everything unhurt and in its place—not even an egg had been broken. Tested by the dealer who sold it, the unit was found to be in normal operating condition.

All this so pleased Mr. Mello, despite his other ill fortune, that he wrote Edison General Electric Appliance Co., Hotpoint manufacturer, describing his experience and offering the unit for exhibition purposes.

In the advertisement, the two dealers included a reproduction of Mr. Mello's letter, and a photograph of the refrigerator, on exhibition. Lettered on the refrigerator was: "Found in Mud. Floated 1 1/4 Miles. Still in Running Condition."

Winter Furniture Mart Planned For Jan. 9-21

CHICAGO—Winter Furniture and International Home Furnishings Market, sponsored by the American Furniture Mart and the Merchandise Mart, will be held from Jan. 9 to 21, 1939, according to announcement from the two market centers. Only two markets, one in winter and one in summer, will be held this year.

Utilities Should Teach Basic Selling Points, Thompson Believes

FRENCH LICK SPRINGS, Ind.—It is the place of the utility, almost as much as of the manufacturer and distributor, to do all in its power to increase the efficiency of dealers and salesmen as merchandisers of load-building appliances, W. H. Thompson, director of utility sales for Westinghouse Electric & Mfg. Co., said in a recent address before a group of Indiana utility executives here.

"Considerable information now in the hands of utilities would make possible basic training courses, particularly adapted to territories served by operating companies," Mr. Thompson said.

"From the manufacturer and distributor point of view, irrespective of equipment, training courses would generally be much more effective if they could be given to sales personnel who have gone through a thorough general training, conducted by the utility."

"This basic training should include fundamental information on electricity, the rudiments of limits and maximum possibilities of different types of services, with 'reasons why.' Many retail salesmen today do not understand the necessity of range wiring practices, and the load limits of ordinary house wiring."

"Seldom do manufacturers' and distributors' representatives live with the retail salesmen long enough to make many of the sales training programs actively productive. This can only be done through an organized school plan, conducted locally in each of the training centers. Such a program could logically be conducted through the efforts of local electric leagues or the utilities on general subjects."

At a recent dealer conference conducted by a manufacturer of electrical appliances, Mr. Thompson said, it was suggested that utilities would help the dealers build their business by furnishing them with the following information:

1. The number of domestic meters.

2. List of new meter applications—weekly.

3. Saturation figures on refrigerators, ranges, washers, irons, roasters, etc. on its lines.

4. Its rates structure, dramatized as to the cost of current per month for operating these different appliances.

5. Information as to the electric equipment of each family, and which families are prospects for new appliances—secured through a house-to-house appliance survey.

"One of the greatest problems of the appliance industry today," said Mr. Thompson, "is to get the distributors and dealers to realize the extent of their local appliance market, and to properly analyze it so as to organize adequate manpower to cover it."

"Dealers, trained and supplied with the necessary information, can be of special help on the minimum bill customer problem."

Boston Edison 'Open House' Arouses Public Interest

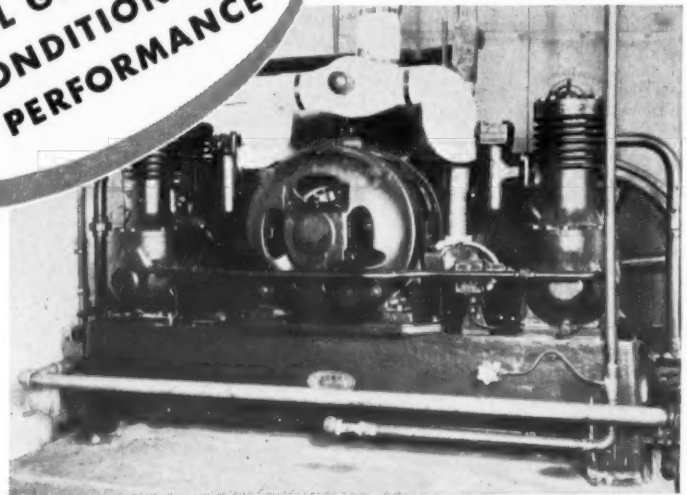
BOSTON — The annual "open house" event at retail appliance sales outlets of the Boston Edison Co. was a greater success this year than ever before, largely because of public interest in modern electrical equipment following use of expensive and poorly contrasting substitutes in the emergency period after the Sept. 21 disaster.

The celebration was held during the week of Nov. 14 at all Edison Shops in the company's territory. Special appliance demonstrations emphasized the now general understanding that electricity is the most inexpensive of all home necessities.

Claude J. Parks Joins Appliance Dealer

GOLDSBORO, N. C.—Claude J. Parks, formerly an employee of Carolina Power & Light Co., is now with Live Wire Electric Co., dealer here for Universal ranges and small appliances and General Electric water heaters. He is associated in this connection with Lawrence McIntyre.

8 REASONS WHY
Century Type SCH Polyphase
Motors WILL GIVE PEAK
AIR CONDITIONING
PERFORMANCE



1. Unusual ability to start—accelerate and bring the refrigeration compressor up to full speed without overmotoring the running load.
2. Reasonable allowance above estimated requirements to take care of unlooked for situations:
 - a. Low voltage
 - b. Compressor starting at point of maximum torque
 - c. Irregularities, such as compressor valve action
3. Locked rotor or starting currents in conformity to E. E. I. and N. E. M. A. limits.
4. Unusually quiet starting. No grunts or groans. Starting noises create uncomfortable air conditioning just as much as noise in running.
5. Unusually Quiet Running.
6. Long life, because of excellent mechanical construction and electrical insulation.
7. Easy to keep clean outside—keeps itself clean inside.
8. Good appearance to match modern compressor design.

Many thousands of Air Conditioning applications are powered by Century Motors—because the industry has found that without these 8 essential features you cannot get the peak performance so necessary to satisfactory Air Conditioning service. Specify Century Type SCH Motors and be certain you will get nothing less than maximum performance in every Air Conditioning installation...30 Branch Offices and 100 Authorized Service Stations for your convenience.

CENTURY ELECTRIC COMPANY
1806 Pine Street St. Louis, Mo.
Offices and Stock Points in Principal Cities

ONE OF THE LARGEST EXCLUSIVE MOTOR MANUFACTURERS IN THE WORLD

You can sell more Copelands

because they're priced to sell!

Today's market is price-minded. Copeland's low price means "lower-down-payment and easier terms" and those are magic words! Get the facts about Copeland's extraordinary proposition. Write today!

Copeland Refrigeration Corporation
Sidney, Ohio



Commercial Refrigeration

Ice Cream Concerns, Drug Stores, Locker Plants, and Other Types of Retailers Likely To Figure In Sale of Frozen Foods

Who is selling quick-frozen foods to the public now, and through what other channels are they going to be sold in the future? These are the two questions which equipment manufacturers and dealers ask most about the quick-frozen foods industry, and in the following article, some answers are given based on a comprehensive survey.

KNOXVILLE, Tenn.—The trends being taken in the retailing of frozen foods were described by Harry Carlton, market investigator, University of Tennessee Agricultural Experiment station, in his talk before the Food Conference here recently.

From the sales standpoint, Mr. Carlton explained, frozen foods divide into two general classes: (1) the frozen-pack fruits which are sold to preservers, ice cream manufacturers, pie bakers, and other processors, for manufacture into various food products; and (2) the packaged foods sold for institutional and retail consumption.

Lacking better names these two groups are called "slow frozen" and "quick frozen." From the production and technical standpoints the two classes overlap and these names are not necessarily descriptive of the freezing methods employed.

FROZEN PACK IS ONE THING

Frozen-pack fruits are now well established. The first commercial packs were made about 30 years ago. Frozen in 50-gal. wooden barrels and other large containers, they are sold almost entirely to processors. Preservers take the bulk of the barrel pack.

Ice cream manufacturers take a small percentage of the barrel pack but buy mainly the smaller packs. The pie baker quite generally prefers 30-lb. units or even smaller. Manufacturers of soda fountain supplies, extracts, and other products containing fruit flavors are also purchasers of this class of frozen pack.



**PILOT-OPERATED
Refrigerant Valve
GENERAL K-15**

For handling ammonia, methyl chloride, sulphur dioxide, Freon, air, gas, water, light oil and steam. Pilot piston operated. For high and low pressure duty at full ported capacities. Minimum pressure drop. The pilot valve of Type K-15 is hardened steel; main valve has a composition disc insert, insuring tight shut-off.

Request new Catalog which lists all General Products for air-conditioning and refrigerant service.



New York City 267 5th Ave.
Chicago, Ill. 450 E. Ohio St.
Other offices in Cleveland, Detroit, Houston, San Francisco and Glendale, Calif.

A 1935 survey estimated the total production of frozen-pack fruits as approximately 86,000,000 lb. In 1937 sales had grown to a yearly volume of approximately 125,000,000 lb.—a relatively small percentage increase when compared to the growth of quick-frozen foods over the same period.

The red sour cherry pack is estimated to have increased from 16,000,000 lb. in 1935 to 30,000,000 lb. in 1937, and our importations of frozen blueberries from 4,500,000 to 9,000,000. A pack of at least 6,500,000 lb. of frozen apple slices was made in 1937, representing an increase of 1,000,000 lb. per year for the past two years. These are mainly pie fruits and it seems probable that the greater part of the increased sales in the slow frozen class was for the pie trade.

MOVES EAST

Until three or four years ago, Oregon and Washington practically monopolized this frozen-pack fruit market, especially the strawberries. Since then Eastern and Southern packers have been throwing increasingly heavy packs into this market bringing about a bad competitive condition with increasingly narrow profit margins.

The Northwest was experimenting in 1935 with a capped and cleaned single-frozen bulk strawberry pack to compete with this surplus removing crate-freeze. They have increased this type of pack from 24,000 lb., in 1935 to over 1,750,000 lb. in 1937 and most of it is reported going into our Midwestern markets, according to Mr. Carlton.

QUICK FROZEN FOODS MUST BE SUPERIOR

"The second group, the so-called quick-frozen foods, present a much more interesting commercial problem," asserted Mr. Carlton. "A young industry, it has had difficulty in finding a suitable descriptive name, and more particularly, a name that would effectively distinguish its products from the older cold storage foods which have not always been acceptable to fastidious consumers."

"From the sales standpoint, 'quick frozen' means packaged fresh food, prepared ready for cooking or serving, and delivered to the consumer in a frozen form. Since it is a new food, or more exactly a new food form, the housewife expects some-

COAST-TO-COAST



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Prompt delivery in standard containers from stocks in principal cities. Write for list of distribution points.



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THE R. & H. CHEMICALS DEPT.
Wilmington, Delaware
ARTIC—the preferred Methyl Chloride for Service Work

thing superior to what she has been buying.

"Otherwise it has no excuse for existence. She has become accustomed to uniform standards of quality in canned and other packaged goods. She usually has an opportunity to look over and select from the ungraded fresh market. In frozen food she expects the quality of the best fresh foods and the uniformity of her favorite brands of canned foods."

"If she gets a poor quality of frozen product the first time she will be inclined to judge the entire industry by that experience and be reluctant to try it again."

NOT MORE EXPENSIVE

"Many consumers consider that the price of quick-frozen foods places them in the luxury class. This is largely a question of what we compare them with. It is conceivable that a package of all-edible asparagus tips may be less expensive than an equal quantity of fresh asparagus remaining after the waste parts have been removed."

"If it does cost a few cents more, we have to take into consideration the vitamin and nutritive value, and the preparation labor which has been done. Also the convenience of purchasing sight unseen, a standard, uniform product."

"Comparing the fresh frozen vegetable with the canned product the price per pound is in favor of the latter. The canning industry has been long established, it is accustomed to stiff competition and a narrow margin of profit."

"The frozen food industry has not settled down to working out real economies in processing and distribution, nor has it reached a degree of standardization and quantity production which would justify the narrow profit margins of the canning industry. It is, however, in a position to work out gradually lower price schedules, while the canners have gone about as far as possible under the present methods of operation."

WHO SELLS THEM?

"One of the questions I am most often asked by housewives outside the large Northeastern cities is, 'Where can I get it?'"

"With over 600,000 retail food outlets in the country, there are only 5,000 authorized retail quick-frozen food installations. This does not mean, of course, that only one out of every 120 families can buy commercially frozen food, because these installations are strategically placed in the richest buying centers."

"The early distribution of frozen foods through the established channels built up by the canned and fresh food industries encountered difficulties. This was not just a new food product. It was a radically new form of food preservation which required special facilities for handling and storage."

EARLY PROBLEMS

"The retail grocer had no low temperature holding facilities and the specially built cabinets were almost prohibitive in price. Housewives had no knowledge of the new food, or its qualities or of its proper care in the home, and the retail grocer does not consider it his job to educate the housewife or promote the sale of new food products. Also, he had no special incentive to push a line which he felt would merely compete with the processed and fresh foods he was already carrying."

"Our 1935 survey found retail distribution practically at a standstill except in New York, Boston, and a few test cities where special sales

promotion efforts had been made.

"We are all familiar with what has happened since—the perhaps too rapid expansion of retail distribution in the large cities and the steady, healthy growth of institutional sales distribution, extending into the smaller cities throughout the country."

TREND OF DISTRIBUTION NOW

"Distribution has not been limited to the channels followed by canned and fresh products—although wholesalers of both have taken it up, sometimes because they were afraid of its competition with their regular business, and sometimes because it enabled them to handle a complete line of fresh foods from strawberries to salmon steaks."

"Here in Knoxville an ice cream company is selling a complete line of quick-frozen foods and a leading meat packer has taken on a line of New York State fruits and vegetables. Both of them are in a position to handle frozen foods because they have low temperature holding rooms in which to store their stock."

"The largest distributor of quick-frozen foods has approximately 125 wholesale distributors in 33 states and the District of Columbia. Of those which could be identified according to the class of business in which they were engaged, there were 65 ice cream manufacturers, 14 wholesale grocers, nine fresh produce concerns and several poultry, meat, and fish distributors."

"The ice cream manufacturer is already in the business of quick freezing and distributing an agricultural product. He has low temperature storage rooms, trucks, and retail cabinets. In many sections of the country the ice cream manufacturer has the only suitable facilities."

IN THE OFF-SEASON

"In most localities ice cream sales are down from October to June—the period during which frozen food sales are highest. Many ice cream companies operate at a loss during this off period and see in frozen foods an opportunity to convert a loss into a profit."

"The meat packer also usually has facilities for the storage and distribution of frozen foods. Unlike the ice cream manufacturer his business is more evenly distributed throughout the year, but he sees in frozen food an opportunity to make greater use of his investment in storage rooms and trucks."

"One ice cream system has suitable storage and distribution facilities in 170 cities east of the Mississippi River. The Southeast is practically blanketed by an ice cream company which is now distributing frozen foods to the institutional trade and gradually expanding their retail distribution."

DRUG STORE FACILITIES

"There are low temperature cabinets in over 50,000 drug stores in this country. Do you think for a moment these cabinets are going to remain closed to frozen foods?"

"I have heard complaints of drug store cabinets so full of frozen foods there was insufficient room for their ice cream supply. Will the drug store become a general food store? Or will we buy our ice cream with our other quick frozen food from the grocery store cabinet?"

"Some ice cream and dairy companies point out that they have milk stations and cheese plants in good agricultural sections and ask why they should not use this set-up to pack and freeze their own line of frozen food."

THE LOCAL PACKERS

"If one organization buys food products direct from the farmer, processes them and sells them through its own stores, is there a possibility of a single middleman, with a single overhead and profit, operating in the large scale distribution of fresh produce, direct from the farm to the consumer?"



Send for the New
REFRIGERATION CATALOG

Seven Models of Compressors
Fifty-eight Models of High-
sides from 1/4 H.P. to 15 H.P.
BRUNNER MANUFACTURING CO.
UTICA, N. Y.

"Freezer-lockers are becoming another important element in the distribution of frozen foods in the smaller communities where other low temperature facilities are not available. Not only do they enable the farmer to freeze and store his meat and garden products for his own use, but he can sell his surplus products to his neighbors and to local townspeople for storage in their own lockers."

"Farmers and small packers can utilize freezer-locker facilities for making commercial packs for local distribution. They offer opportunities for experiments with locally grown varieties of fruits and vegetables to determine their suitability for freezing."

PUBLIC DOESN'T CARE

"The consumer is not interested in when or where his frozen food is packed. The packer will naturally pack where the best product can be most efficiently produced regardless of the season."

"It has been stated by some packers that it is their intention to maintain so far as possible, uniform selling prices throughout the year in all sections of the country. Will the high priced fresh winter peas from the Imperial Valley be able to compete with peas packed the previous July in Maine? With seasons out of our fresh fruit and vegetable picture, will northern states become our winter garden states?"

"In Florida last February at the height of their strawberry season I found berries packed the season before in Virginia being sold in competition with the fresh crop. The high priced Florida products going north were being met by the southward flow of last season's northern pack. Florida hotels were serving frozen California orange juice."

"I was told that Florida formerly depended on California for their fresh asparagus but they were switching to New Jersey asparagus, packed the year before."

Zarotschenzeff Forms New Frosted Foods Firm

NEW YORK CITY — National Frosted Foods, Inc., new organization formed recently by M. T. Zarotschenzeff, inventor of the "Z" process of quick freezing, and his son, W. M. Zarotschenzeff, is planning to contract directly with producers and distribute their frozen foods, under the packer's brand name or its own brand.

While the company is making a bid for the institutional market, it is also planning to go into the retail food market, supplying display cases for frozen foods to the retailers.

According to Mr. Zarotschenzeff, the company will offer free technical advice to quick freezers and will even go so far as to offer quick-freezing methods and apparatus free of royalty.

Construction of \$65,000 Storage To Begin

NATCHEZ, Miss.—Work order for the Adams County farmers' cold storage plant, twelfth such plant to be erected in Mississippi, has been issued, and construction of the \$65,000 structure will start at once, Robert McNeely, president of the Adams County Farm Bureau, has been notified by the WPA office at Jackson.

The plant is financed by funds from a \$35,000 bond issue and a PWA grant of \$30,000. It will be located near Natchez.

New England Apple Grower Installs Cold Storage

HAMPTON FALLS, N. H.—Installation of a cold storage plant will enable complete winter operation of its open-air market and packing house, it has been announced by the Applecrest Farm, one of this state's foremost apple producers.

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Commercial Refrigeration

Dr. East Tells How Refrigerated Venders Are Increasing Milk Consumption

DETROIT—By increasing the use of cooling equipment in the processing, sale, and preservation of milk and milk products, the refrigeration industry can contribute much toward raising the general health level of this country, Dr. Bion R. East, technical consultant of Vitex Laboratories, Inc., Harrison, N. J., told members of the Detroit Section of American Society of Refrigerating Engineers at their meeting Nov. 15.

Dr. East spoke on "Dairy Refrigeration and Its Relation to Public Health." Motion pictures describing the manufacture of Peerless fin, off-center, and "spine" coils were shown by M. W. Knight, sales manager of Peerless of America, Inc. F. M. Cockrell was chairman of the meeting.

VENDERS PROVE WORTH

Consumption of milk has been increased through the recent development of bottle-milk vending machines, used in schools, factories, and similar places, Dr. East declared. He cited this as one contribution which the refrigeration industry, through the dairy industry, is making to public health.

In four Peoria, Ill. factories and an armory where milk-vending machines were used, sales totaled \$23,000, the speaker said; and in another city, where one of the machines was installed in a brewery, employees preferred milk even over the free beer they were allowed daily.

Studies of these brewery employees after the vending machine had been installed showed a greater consumption of milk in the home than before, and an increase in the health of workers and their families.

These new vending machines represent only one of the ways in which the dairy and refrigeration industries can combine their efforts to increase the use of milk, as well as refrigeration equipment, Dr. East said.

Need of refrigeration in the dairy industry is particularly important when the chance of contamination at the source is considered, Dr. East declared.

Recent inspection, he said, disclosed that 28% of 1,200,000 herds examined showed reaction to Bang's Disease, a disease peculiar to cows and goats which produces Malta Fever in humans. The same inspection also revealed that about 96% of the same number of cows have had mastitis.

Translating the importance of herd health into terms of public health, Dr. East said that 400 cases of scarlet fever and five deaths in a New York community had been traced to a diseased condition in one fourth of the udder of one cow. Result of the investigation's findings was a compulsory pasteurization law.

ENGINEERS SHOULD LEARN

Refrigeration men should learn to know the dairy industry better, Dr. East said, adding that cooling enters into at least three phases of the milk production process: keeping the milk at proper temperature until pasteurization, cooling it during the 24 hours before it is delivered to consumers, and preserving it at safe temperature until it is used in the home.

Turning to a study of milk consumption from a public health standpoint, Dr. East said that if the present per capita consumption of .8 pint per day could be raised to a quart, the country's general health would be greatly improved.

Survey of the average American diet shows a lack of calcium, needed during the growth period for the formation of strong, sturdy bones and teeth, he went on.

Evidence of what increased consumption of milk would do for human beings has been obtained through experiments made by Dr. Sherman, New York biochemist, with two rat colonies of the same stock. Both of the colonies were fed a normal well-balanced diet, except that the calcium content of the diet fed the second group was doubled.

This resulted in a longer life span

for the second group, which, translated into human terms, would mean an extra 10 years' life. Milk is our best known source of calcium, Dr. East said, leaving the obvious moral unspoken.

In addition to its health value, refrigeration men in particular have another selfish stake in effecting an increase in per capita milk consumption, Dr. East pointed out. Farmers who can sell more milk will have more money with which to buy household refrigerators, milk coolers, and other equipment.

Further evidence of the value of milk in the diet of children has been obtained in a test made in a New York City school, where the number of cavities in teeth was reduced from 400 to 200 per hundred children by the feeding of a glass of milk every afternoon, Dr. East said.

Faulty tooth development before birth often results in ailments in later life which ordinarily would not occur, he declared. Ailments resulting from diseased teeth are a definite cost factor in industry. The federal government spent 8 million dollars last year in protecting the health of its civil employees, Dr. East said.

A considerable amount of this sum, he went on, likely was spent in correcting ailments caused by defective teeth, which in turn is the result of a lack of calcium in the diet.

Merchant Tells Reasons For Using 'Sub-Depth' Case and Cooler

(See Picture on Page 19)

BIRMINGHAM, Ala.—A custom-built display case and a made-to-order walk-in cooler help carry out the meat merchandising policies of Waite Dairy Store, Inc., according to Robert Stapleton, owner of that company's meat department.

The display case, manufactured by Fogel Refrigerator Co., is only 43 inches high, compared to the more-or-less standard height of 50 inches. Asked to explain why he wanted a specially low case, Mr. Stapleton said:

"It all goes back to the basic psychology of selling. It simply represents another attempt to remove all possible barriers between us and our customers. With this low-built case, the customers can sit on stools while being served, and still see everything that goes on behind the counter.

"This display case enables us to get closer to our customers, and to make them feel more like we were helping them solve their meat problems. In this respect we are merely following the lead of many chain stores, which long ago eliminated the glass counter and substituted low, open-top displays so that clerks and customers could intermingle more freely.

"But the case has a utilitarian purpose, too," he pointed out, "as its top is low enough to be used for a wrapping surface and for scale space. The regulation case is too high for these purposes."

The lower display case also affords the customer a better view of the Koch walk-in cooler in the rear of the store, Mr. Stapleton explained. This unit also is of sub-standard height, being only 7½ feet tall. This lower height is made possible by the fact that refrigeration is provided by means of two forced air units, one in each end of the cooler, thus eliminating the need for overhead refrigerant pipes.

This cooler also has two large glass display windows in front, enabling the customer to see the stock of meats contained within. "Why buy \$500 worth of quality meat and then hide it inside the cooler?" Mr. Stapleton reasons.

On each side of the cooler's center door there are two small storage windows, one for wrapped packages awaiting delivery and the other for fast selling items.

Blower-Filter-Cooler Line Is Introduced

(See Picture on Page 19)

HAMMOND, Ind.—Development of the complete line of Filterpure evaporator-blower-filter units for commercial applications has been completed, and shipments to manufacturers are now being made, according to an announcement by Lyman B. Betz of Betz Corp., Filterpure manufacturer.

The new display case unit is made in four sizes for use in 6, 8, 10, and 12-foot double-duty cases. Single duty models, Mr. Betz says, will be available soon.

The unit for walk-in coolers also is made in four sizes, for use in coolers up to 10 x 8 feet in size. As this unit occupies no head room whatever, coolers in which it is to be installed need only be built 7 feet high, it is said, thus reducing cost of construction as well as of operation.

These Filterpure units are completely self-contained, and can be installed in a few minutes. The centrifugal blower circulation is said to insure constant, even air circulation, irrespective of the refrigeration load.

Humidity varies with the type of installation, ranging from 85 to 91%, it is claimed. Mr. Betz adds that these humidities will run 15 to 30% higher than those in gravity coil installations. Another advantage claimed by Filterpure is that high air velocities are entirely eliminated, due to exclusive design of air intake and air discharge.

Schumacher-Warner To Sell Frigidaire

STAMFORD, Conn.—Schumacher-Warner Refrigeration Service, 20 Quintard Place, has been named dealer in Frigidaire commercial refrigeration.

Members of the new firm are Carl Schumacher, for nearly 17 years retail manager of Downes-Smith Co. and in charge of Frigidaire installation and service, and "Bob" Warner, for 10 years chief service man for the Downes-Smith Co.

Glenn Price Joins Holbert Electric

TULSA, Okla.—Glenn Price, factory representative in northeastern Oklahoma for the Kelvinator division of Nash-Kelvinator Corp. and recently engaged in distribution of Kelvinator products, has joined Holbert Electric Co. here as salesman for Kelvinator commercial refrigeration in this area.

Alabama Fixture Co. Alters Name, Moves

BIRMINGHAM, Ala.—Alabama Fixture Co. has changed its name to Alabama Fixture & Refrigeration Co. and moved to larger quarters at 2126 First Ave., N., reports James E. Powell, proprietor. The company sells Viking cases, Curtis refrigeration units, Pelco beverage coolers.

Cooled De-Mothing Room Protects Fur Coats

TOLEDO—Because Mrs. Ferdinand Roth believes that chemical methods of de-mothing tend to discolor and dry out furs in storage, refrigeration was selected as the best method of protecting coats stored in the vaults of the Roth Fur Co. here.

Installation of refrigeration equipment in the new Roth store was made by Great Lakes Air Conditioning Corp., General Electric dealer.

Control of humidity is important in the storage of fine furs, Mrs. Roth believes. A certain amount of moisture in the air is necessary to prevent drying, while too much moisture will result in mildewing.

Temperature in the vault, which has a storage capacity of 4,500 coats, is maintained at 30° F. all year around. Coats are stored during the summer and again when their owners go south for the winter.

Mrs. Roth asserts that freezing alone will not destroy moths. For this reason a special small refrigerated room is used for de-mothing before coats are placed in the large storage room.

In this de-mothing room, the temperature is first reduced to 16° F., then raised to 60° F., and again reduced to 16° F. According to Mrs. Roth, the moths are dead after this treatment, and the coats may safely be placed in storage.

For economy of operation the system employs four small compressors, each capable of carrying one-quarter of the total load.

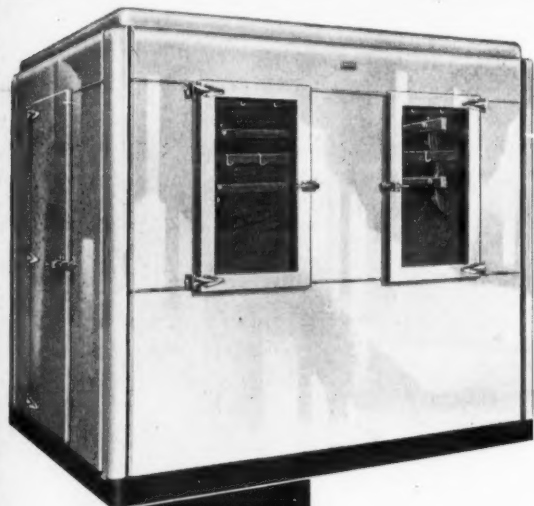
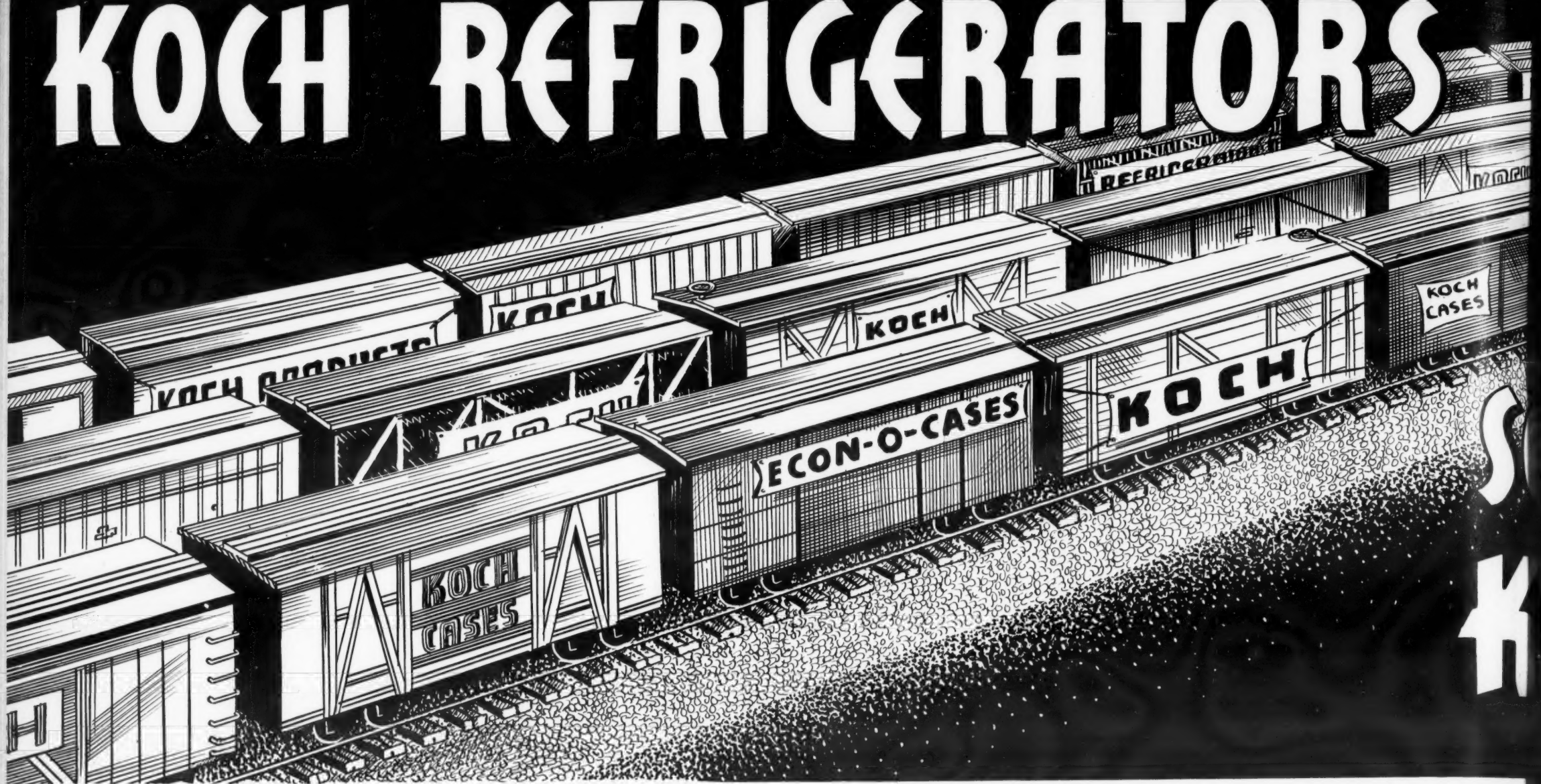
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Room, Armstrong Cork Company, Building Materials Division, 1002 Concord Street, Lancaster, Pa.

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"Koch is outstanding in quality, and qual-
ity has built our business."



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"We have had phenomenal success with the Koch line. Every sale means another
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EDWARD A. STILLER
Stiller Equipment Corp.
Boston, Mass.

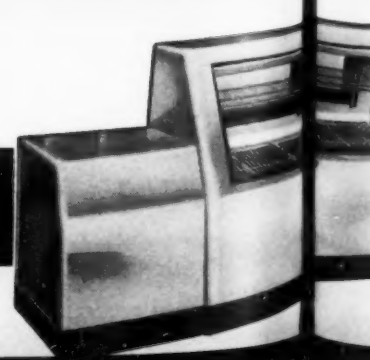
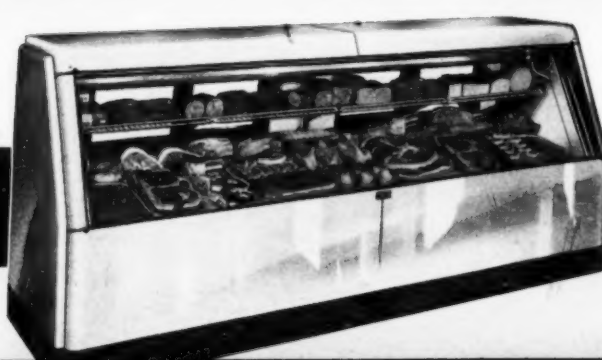
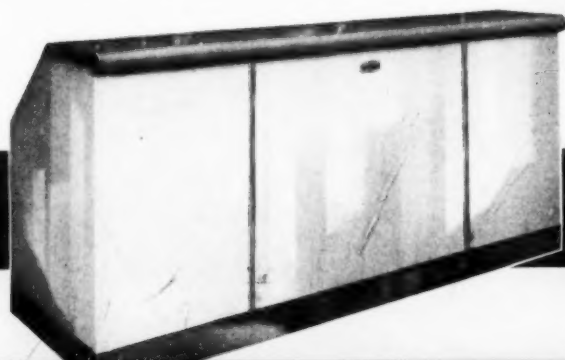
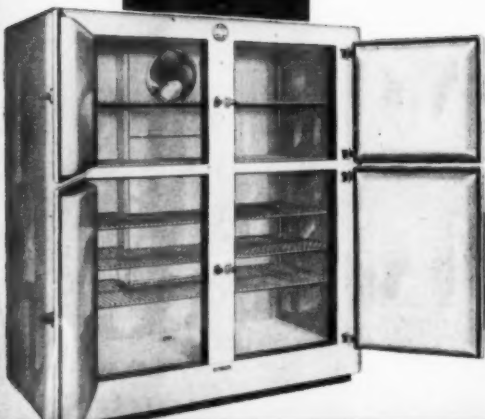
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making 1938 one of our best years."

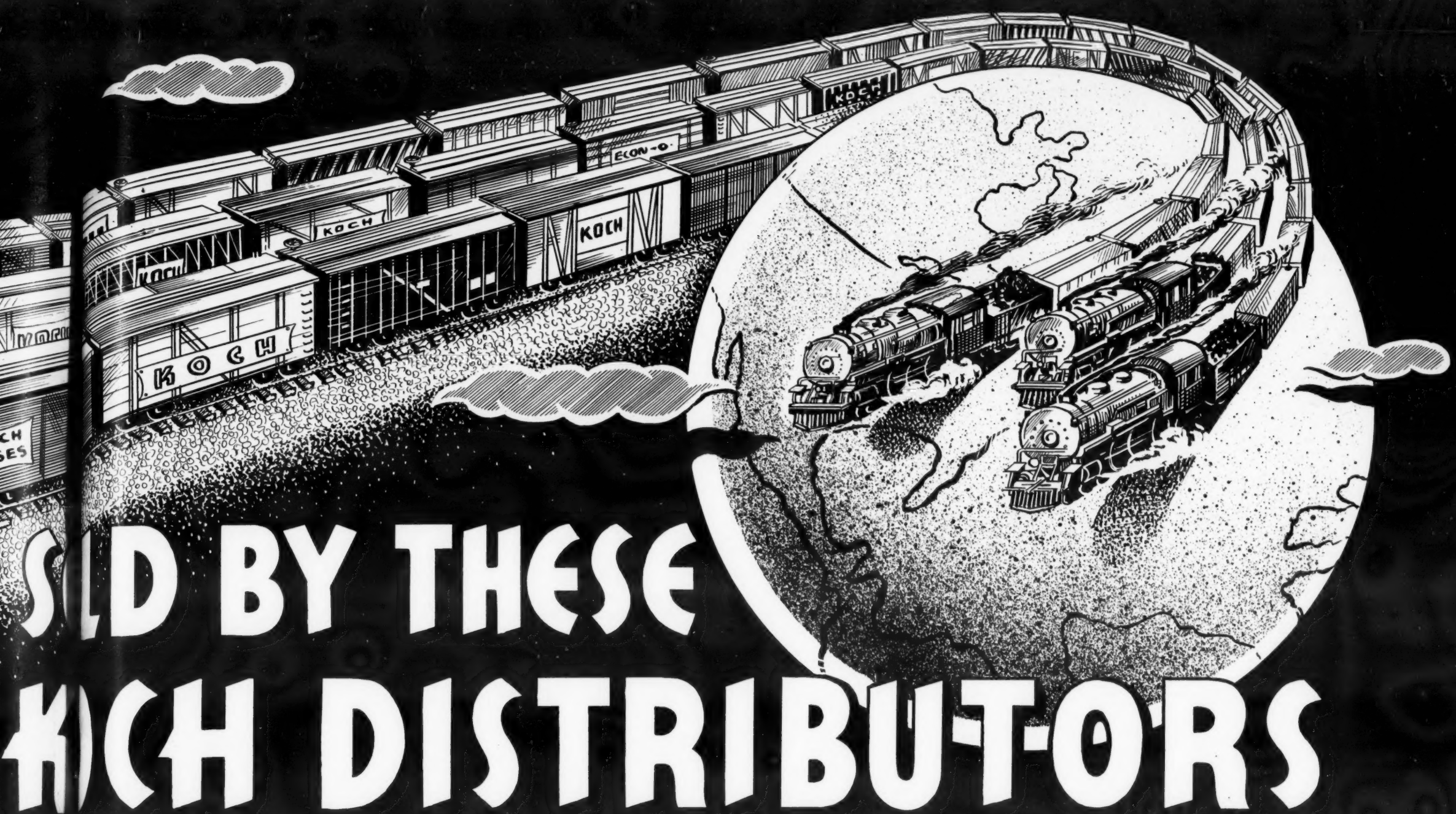


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Sanitary Co.
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"We like Koch for the same
reasons as our customers."

KOCH REFRIG

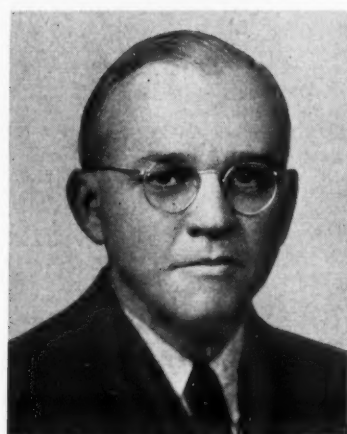




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Pound Company
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"40 years in refrigeration convinces us of the superiority of Koch equipment."



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"I've had wonderful success with Koch. I'm proud to be in the organization."



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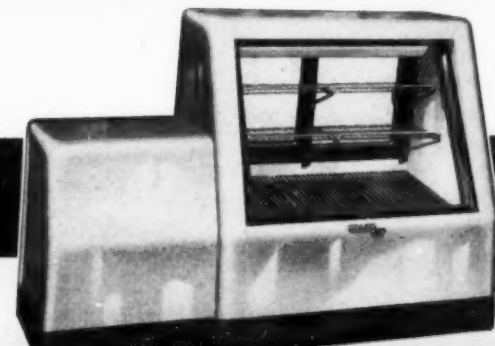
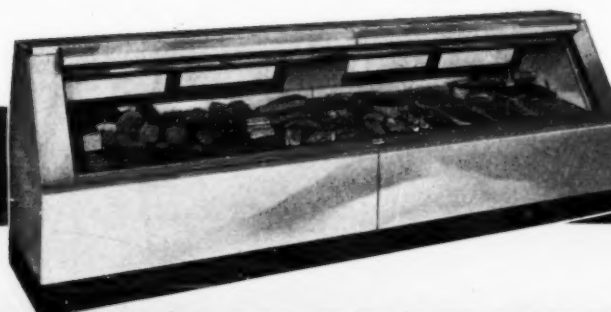
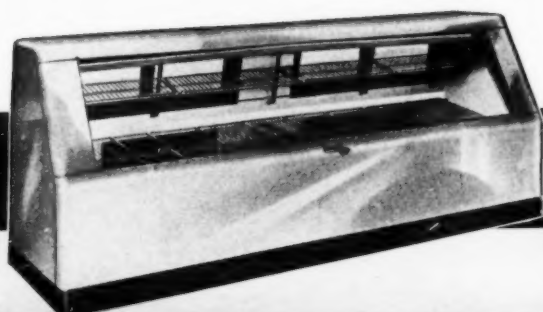
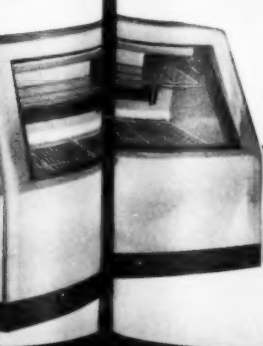
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Epstein Bros.
Hartford, Conn.

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Killing the Goose That Lays the Golden Eggs

J. R. WEAVER, director of Equipment Inspection and Test for the Westinghouse company was rummaging around in an old history tome the other day when he came across the following information:

"In 1663 an attempt was made to run a sawmill by water power in England, but its menace to hand labor led to such violent opposition on the part of the people who saw so much danger of throwing the working people out of means of earning a livelihood with hand saws, the project was abandoned.

"A mill established in East London in 1767 to run by windmill power was destroyed by the mob who saw in it only a device to take the bread out of their children's mouths."

Seems absurd now, although the same argument is heard today, and is believed and acted upon by our current President. A previous Roosevelt, the gallant "Teddy" was criticized for allowing Gen. Goethals to use steam shovels in building the Panama Canal, because more men could be employed if only hand shovels were used.

"Certainly," said Roosevelt I, "and even more men could be employed if they used teaspoons instead of shovels!"

Machine's Function Is To Create More

Fundamentally, a machine is simply a power tool. Man can turn out work with hand tools; he can turn out infinitely more work with power tools, and at a greatly accelerated rate. The more work man can turn out, the more things he can have, and the better he can live.

But, say the pessimists, machines cause men to lose their jobs. If they haven't jobs, they haven't the money to buy the goods made by machines. Hence, you must limit production, and spread the work among more men.

That this condition becomes

temporarily true over and over again does seem apparent. But it must also be observed that more and more men are put to work, and that the standards of living rise progressively. After each periodic displacement of workers, glut of production, and economic depression, the world comes out of it richer than before.

Displaced labor is absorbed in new industries made possible by new inventions and new machines. By exchanging their production of these new goods for the production of already existing industries, the production—and labor needs—of the older industries were increased.

When there is a glut of one kind of goods, it does not mean that that particular industry has over-produced, and should be curtailed. Rather, it means that there hasn't been enough other kinds of goods produced to exchange for this "glut." The world has never had enough goods. New Dealers themselves say that "one third the nation is ill-housed, ill-fed, ill-clothed." How are we going to supply them with the things they need if we cut down on production, limit machines, put a moratorium on inventions, shorten hours of work, and chase capital into hiding?

Cure For Overproduction Is More Production

Best cure for overproduction, paradoxically as it may sound, is more production. Antidote for too many labor-saving machines is more machines.

Writing in the Nov. 12 issue of The Saturday Evening Post, Garet Garrett declares that for the first time since steam power came into being, the machine has been stymied. It has been stopped, he opines, by general adoption of economics-of-scarcity theories.

What the machine actually destroys, he points out, is not labor, but capital. By doing things differently, more cheaply, faster, by doing new things, the machine destroys old investments. New machines render obsolete old machines, and relegate the latter to the scrap heap. In the process, labor is temporarily displaced. Examples:

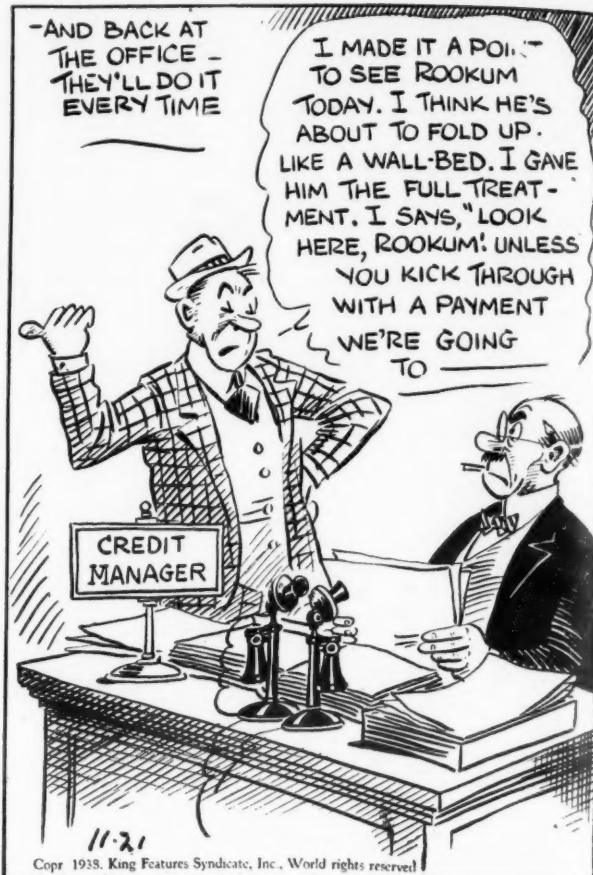
Railroads destroyed capital in horses for the pony express, and threw the riders out-of-work. Railroads then went ahead to employ hundreds of thousands, build huge accumulations of capital. Now the railroads are being supplanted by other forms of transportation—automobiles, trucks, buses, and airplanes.

New Dealers Acting On Wrong Theory

Likewise, both the government and private utilities have big capital investments in power plants and transmission lines. Small individual Diesel generators may someday destroy a large portion of that capital, and temporarily displace more workmen just as electric refrigerators displaced ice plants and delivery men—and built an enormous new industry in the process.

The machine is ruthless; it is a great juggler of capital. And Garrett points out that the New Dealers have acted to preserve present capital concentrations, rather than allow the machine to break them up and start new ones. Hence our unemployed are still unemployed, having had no opportunity to become reabsorbed in

They'll Do It Every Time . . . By Jimmy Hatlo



new industries. It was done, says Garrett, as follows:

"By debasing the currency, by repudiating its own gold debt, by inflating credit, this new government undertook to restore the fallen price structure, and did. Thus, as if by artificial respiration, a great mass of dying capital was preserved.

"Then to defend the restored price structure the government passed laws to restrain competition and to limit industrial production. The effect of this was to save those monopolistic entrenchments and field enclosures that were about to be destroyed.

"It went on from there to limit the hours of labor, the produce of the soil, private profit, the rate of interest, the right of individual contract between employer and employee. Its passion was to control and to limit.

"Its darling idea of stability and equilibrium, for all its reasonable sound, turns out to be, if you examine it, the extreme reach of that same passion. What is it but the thought at last that change itself shall be controlled and limited?"

'Share-the-Wealth' Idea Is Denial of Progress

Share-the-wealth plans are based on an assumption that the world is going to remain—or must be made to remain—static. We have enough of everything, argue the pessimists, no let's divide it better.

Recall the story of the United States Patent Office official who, before the advent of the electric light, the all-electric kitchen, air conditioning, radio, the automobile, the telephone, resigned his job? In so doing, he recommended publicly that the office be abolished, as everything that could be invented had been!

Inventions and improvements in design continually realign world forces. Mass production of airplanes in Germany, plus their new compressed air bombs, forced the Peace of Munich. New inventions, in turn, will push Hitler into the background, unless an outraged combination of nations (or an assassin's bullet) does the job before machine evolution creates a new balance of power. As Garrett puts it:

"Given a free competitive system, with the creative power of man still acting, the machine will wreck the most powerfully entrenched monopoly, always in some unexpected manner. . . .

"Production is the index. Power is the substance. A declining curve of production is the sign of a declining curve of machine power.

"It is not a matter of prosperity, the balance of trade, a fall of exports, a rise of imports. For now the state of things is of this kind, that the ultimate power in all meanings—economic, political, and military—is machine power."

LETTERS

The 'Purge' Editorial Is In Demand

Ochiltree Electric Co.
General Electric Distributor
505 Liberty Ave., Pittsburgh, Pa.

Editor:
Just recently (and we believe it was a November issue) your publication contained an article which we are very much interested in getting. The title we believe covered "The Purge of 1938," but this may also be incorrect.

You probably know exactly what we mean and we would certainly appreciate having you send us the issue in which this article appears. If you will let us know the cost of this issue, we will see that you are reimbursed for it.

Kindly send this issue through marked for me personally so I may in turn, see that it is given to Mr. Ochiltree, for whom we are endeavoring to get it.

R. W. EVANS,
Sales Promotion Manager
Answer: We believe you have reference to the editorial "The Great Purge of 1938" which appeared in the Oct. 26 issue of AIR CONDITIONING & REFRIGERATION NEWS.

This editorial explained how the household electric refrigeration industry has been cleaning up inventories, an over-supply of second-rate dealers, and other factors which proved injurious to the business this year.

'Hits the Situation On the Nose'

The Cramer-Krasselt Co.
Milwaukee, Wis.

Editor:
We are in the midst of the next annual survey of the appliance market, and preliminary results are along the pattern of the editorial in your Oct. 26 issue, "The Great Purge." Whoever wrote it, and I imagine you did, hit the situation on the nose. It is one of the best things I have read.
JERRY STEDMAN,
Vice Pres. in Charge of Market Planning

Air-Conditioning Books! Help English Engineers

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British Distributor of
Westinghouse Air Conditioning
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London, S.W.1

Editor:
I congratulate you on the 500th issue and would give you my good wishes for its continuity and healthy progress.

You will be interested to know that the "Air Conditioning Made Easy" manuals have proved of great value and interest to the juniors and seniors in our employ, and their clear and concise compilation makes them very easily understandable to everyone who reads them.

In sending you my wishes I am mindful of the courtesy with which you received me on my visit to Cass Ave. in May last.

J. D. MACFARLANE,
Managing Director

More Red Book Coupons

61 N. Franklin St.
York, Pa.

Sirs:
I have a little time now so I will tell you what I think of the Red Book you have published. It is something I have been looking for a long time. I think it is the greatest thing you people are doing to help the service men. It will be much nicer if you can get all manufacturers to cooperate with you. I am sending a few coupons to you from the Red Book.

WM. H. BARN

Recommended For Data On Locker Plants

South Dakota State College
Brookings, S. D.
Oct. 17, 1938

Sirs:
Will you please send me a sample copy of your Aug. 17, 1938 issue. I am interested in the development of freezer-locker plants and intend to conduct some research in the near future with foods in freezer storage. I was referred to this copy of your magazine by representatives of the Master Locker Co., Sioux City, Iowa.
FORREST U. FENN.

Yep, Still Here, Bigger'n Better Than Ever

East 24 Sharp Ave.
Spokane, Wash.

Sirs:
You still there?
I would like to get back into the game and need the News to help. An old subscriber.

EARL SUMMERS

Service Series Sought

C. A. Longbrake
Refrigeration Service
R. D. No. 2, Elyria, Ohio

Sirs:
Please start my subscription with Oct. 26, 1938 issue. I do not want to miss any articles on Servicing Ice Cream Cabinets and frozen food cases.

C. A. LONGBRAKE

Commercial Refrigeration

Controls Should Function To Prevent Temperature Variations, Deposition of Moisture, and Frost Accumulation

Editor's Note: This is the first part of an article by Mr. Newton in which he discusses the function of controls in a commercial refrigeration system, and some of the specific control methods that have been and are being used.

The article will be concluded in next week's issue, in which Mr. Newton will explain in some detail the various types of controls.

By A. B. Newton, Engineering Dept., Minneapolis-Honeywell Regulator Co.

The advancing field of commercial refrigeration requires constant improvement in the methods and equipment provided for automatic control. This article proposes to discuss recent improvements in methods of automatic control, and to compare the results now obtainable with those found with older methods of control.

One often hears the statement made with reference to heating equipment that "controls are the heart of the system." This is even more true in commercial refrigeration than in heating since in refrigeration not only is temperature important, but also the relative humidity and freedom from frosting troubles are of great importance.

Furthermore, most heating jobs are concerned with human comfort and people can adjust themselves to minor temperature variations, while in contrast to this, commercial refrigeration deals with the preservation of food products, which require accurate temperature and humidity conditions to insure their sale at a profit.

REASONS FOR CONTROLS

These factors are all affected to a marked degree by the type of control employed, but before discussing control methods in detail, let us first examine the reasons for using automatic control.

The major requirements may be tabulated as follows:

- To maintain uniform temperature.
- To keep coils substantially clear of frost.
- To maintain the maximum possible efficiency of the refrigeration system.
- To minimize the total weight of frost formed during any given period of time.
- To provide easy means for making temperature adjustments.
- To correct for minor installation defects.

In discussing these requirements one by one, it should be kept in mind that no matter how the load varies, these requirements still exist and should all be met within the capabilities of the refrigeration system.

CONSTANT LOAD JUST ISN'T

Usually, the equipment is designed for operation 14 to 16 hours per day under normal load conditions, but it should be thoroughly understood that normal loads, even in a well balanced system, are secured during only a small percentage of the time. Some jobs will have greater load variations than others, but we will never find the perfect job which has an absolutely constant load.

Variation in temperature should be held to a minimum, in order to improve the quality of the produce being stored under refrigeration.

There are two general types of temperature variation; first, that which occurs over a long period of time; and second, that which occurs periodically over a considerably shorter period of time.

The long time trend is obtained with some control systems, when the load varies gradually as between day and night, and is not particularly harmful, providing the maximum temperature reached is low enough to prevent spoilage of the product, and provided that the minimum temperature reached is not low enough to damage the product, as from freezing.

The short time, or rapid, temperature variations usually occur with each cycle of operation of the com-

pressor with certain control methods and load conditions.

It is particularly important that the temperature should not vary widely with each operating cycle, since this is a major contributing factor to the shrinkage of produce. This is particularly true with meat, since the temperature variation causes the surfaces of the meat to periodically warm and cool, and materially increases the rate of evaporation of moisture from them.

WHY MOISTURE DEPOSITS

Even more disastrous are rapid temperature variations when, during the off period, the dewpoint of the air surrounding the produce rises above the surface temperature of the produce. Under these conditions, moisture is deposited on the surfaces of meat and vegetables periodically, and provides an ideal place for the growth of bacteria and mold to cause spoilage. In general, these conditions can be eliminated by the proper choice of a control system.

Keeping the coils as clear as possible from frost accumulations allows the coils to operate at a higher average surface temperature, and results in better humidity conditions. The average suction pressure at which the equipment operates is also raised, and obviously this greatly improves the economy of the system.

OTHER FUNCTIONS

If the control system can be made to keep the coils free of frost, the necessity for costly, inefficient, and hazardous methods of frost removal is eliminated.

The control system should also provide the maximum possible efficiency for the system as a whole, no matter how the load may change. If the load becomes extremely heavy, as it may in the summer when there is a great deal of service out of the box, the control system should operate the compressor as much as possible without causing it to lose capacity due to frost formation on the evaporator.

It may be that during such periods the refrigerating system will not have sufficient capacity to maintain a constant temperature in the fixtures, and obviously nothing that the controls can do can compensate for a lack of capacity in the refrigerating system itself. Instead, the control system should operate the compressor in such a manner that every possible B.t.u. will be removed from the fixtures.

Under such conditions, long continued operation of the compressor may build up enough frost on the evaporator to reduce the capacity, and the fixture temperature will then rise out of control. A proper control system will sense this condition and correct for it with the minimum temperature change.

Conversely, under extremely light load conditions the control system should not permit the temperature to fall appreciably in the fixtures, and yet the compressor should be operated as often as possible for short periods of time in order to maintain proper humidity conditions.

KEEPING FROST LOSSES LOW

Not only should the coils be kept as clear of frost as possible at all times, but the total weight of frost formed should be kept as low as possible. When heavy frost accumulations occur, almost the entire amount of frost melts or falls off and

runs down the drain when the coil is finally allowed to defrost.

When the coils are defrosted more often, much of the water formed when the frost melts does not run off the fins and is re-evaporated into the air in the fixtures, and thus raises the average humidity and increases its uniformity. This reduces evaporation from the produce.

This action is extremely important to the user of commercial refrigeration equipment, since a large percentage of the frost formed comes from water evaporated from the produce he stores. For example, in a meat box, if it is assumed that the average retail value of the meat in the box is 35 cents per pound, the butcher is actually losing 35 cents per pound in the frost formed on the coils, and just try to sell frost for that price. This represents a major loss, which is often overlooked. Choice of the proper control system can do much to eliminate this waste.

VARIANCE BY PRODUCT

In many cases it is desirable to vary the temperature being maintained in refrigerated fixtures to suit the requirements of different types of produce.

At one time the butcher may have practically 100% beef in a walk-in box, while at another time he has practically all pork. He should be able to vary the temperature to suit the requirements of different types and ages of load.

With fruit and vegetables, an even greater range of adjustment is desirable. Whatever temperature adjustment is made, the control system should still automatically provide all the functions listed above.

Automatic control in residence heating has advanced to such a point that we have only to adjust the thermostat up or down to obtain a different temperature, and it is only natural that the user of commercial refrigeration equipment should expect to do likewise.

COMPENSATE FOR DEFECTS

Automatic controls should be of such a nature that they will compensate as far as possible for minor installation defects, or oversights, in the refrigeration system.

For example, it may be necessary to locate the compressor in a cold location so that the suction pressure does not rise sufficiently to operate a pressure control. The control system should sense this condition and correct for it.

However, it should be noted that there are times when the operation of the system will not produce refrigeration after a prolonged shutdown, because insufficient pressure exists on the high side of the system to cause circulation of liquid refrigerant through the expansion valve into the evaporator.

With no refrigerant being evaporated, operation of the compressor does not raise the discharge pressure to cause circulation and, therefore, no refrigeration can be produced. Under these conditions the control should prevent useless operation of the compressor, which would merely waste power and might cause serious damage to the seal and other parts of the compressor.

Prime purpose of all these control functions is, of course, to prevent deterioration and spoilage of produce and to insure the salability of all of it at the highest possible price.

Four of the chief factors which detract from the salability of meat products are: mold formation, presence of bacteria, shrinkage, and discoloration of meat surfaces. These factors are all materially affected by the temperature, relative humid-

Table 1—Guide For Revising Temperature & Humidity

	Decrease In R.H.	Decrease In Temperature	Decrease In Air Velocity
Mold	Decrease	Decrease	Increase
Bacteria (Slime)	Decrease	Decrease	Increase Above 85% R.H. Decrease Below 85% R.H.
Shrinkage	Increase	Small Decrease	Decrease
Discoloration	Increase	Decrease	Decrease

ity, and air velocity conditions in meat boxes, and counter cases.

Mold generally forms on the surface of the meat, although occasionally it follows lines of tissue into the interior portions. It is indicated by the formation of whiskers, which grow in length as the mold continues to form, and also by a characteristic taste and odor.

MOLD AND SLIME

If the mold is entirely on the surface, the portions of the meat containing it may be trimmed off and wasted in order to make the rest of the meat salable. This trimming represents a major loss to the store owner.

Slime is caused by bacteria on the surface of the meat, and in bad cases of sliming, there may also be a characteristic taste and odor. The presence of slime calls for trimming of the meat to make it salable.

Bacteria forms most rapidly at high relative humidity conditions, such as result from infrequent operation of the cooling equipment and are, therefore, particularly troublesome in the winter time when the load on the meat box is a minimum.

Choice of the proper control system will give frequent short operations of the compressor during such periods, and thereby materially minimize formation of slime and the resulting waste from this source.

Some meats slime much more rapidly than others and in general it may be said that beef may be held longest, pork cannot be held quite as long as beef, and veal will slime quickest of the common meats.

SHRINKAGE PREVENTION

Shrinkage of the meat is a dry-out process and can, therefore, be minimized by maintaining fairly high relative humidity conditions, and eliminating as far as possible wide fluctuations in temperature and relative humidity.

Discoloration is due to the oxidation of the red coloring matter in the meat, and sometimes makes necessary extensive trimming and waste before the meat is made salable.

It is not possible to recommend definite temperature and relative humidity conditions which are suitable for all applications. Furthermore, most installations do not provide for a definite control of relative humidity and, therefore, a compromise between temperature and humidity conditions must generally be made.

Effect of changes in relative humidity, temperature, and air velocity is shown in Table 1, and this table may be used for a guide in revising the temperature and relative humidity conditions on troublesome jobs to minimize mold, bacteria, shrinkage, or discoloration.

In making adjustments to correct temperature conditions, in accordance with the above table, it should be borne in mind that such adjustments may upset the system to some

extent, when using some of the older methods of control.

For example, if a thermostat alone is used to control the compressor, reducing its setting would very likely be followed by serious frosting difficulties. Only with the more modern control systems is it possible to accurately adjust the temperature to any reasonable value that is required.

Methods of increasing or decreasing relative humidity are usually indirect methods, since commercial refrigeration equipment does not provide means of separately controlling the relative humidity in the fixtures.

SUPERHEAT REMEDY

Control systems which automatically maintain the coil surfaces free of frost under all conditions will maintain higher relative humidity under normal and heavy load conditions than control systems which do not defrost the coil on each cycle.

Furthermore, at light load conditions frequent short operations of the compressor will maintain lower average relative humidity conditions with less variation.

Humidity may generally be reduced by increasing the thermostatic expansion valve superheat setting so that in effect the system operates with a smaller coil at a lower temperature. With blower type units, increasing the superheat setting of the expansion valve should invariably result in lower relative humidity conditions in the fixture.

However, with gravity circulation the problem is a little more complex. Reducing the coil temperature causes a more rapid air circulation through the colder portion of the coil which remains in use, and while in general the overall result will be a lower relative humidity, the change is not as great as with blower-type units.

Due to some types of baffles, the air velocity in the reduced temperature coil may increase to such an extent that the fixture relative humidity may not be changed, or may even increase slightly when superheat is increased. While this is not a common occurrence, still it should be watched for after attempting to reduce humidity by adjusting the superheat of the expansion valve.

In adjusting the superheat setting on a system which has given some frost difficulty, it should be borne in mind that increasing the superheat setting will increase the tendency toward frosting; in other words, if the superheat setting is to be increased, the tendency of the system to cause frosting of the coils will always be increased.

Therefore, if you are dealing with a refrigeration system which has already given frosting trouble, these frosting troubles will be increased, and for this reason, this method of affecting humidity has its widest application on the modern systems of control, which eliminate frosting to a large extent, and still provide temperature control.

(To Be Concluded in Next Week's Issue)

Anaconda Copper Refrigeration Tubes

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Commercial Service

Service Complaints & Instructions For The 'Two-Boiler' Soda Fountain

The following article is part of a series on servicing of soda fountains, ice cream cabinets, and counter-type ice cream freezers, written by Mr. Black and Mr. Seitz.

The article in this week's issue is the first half of a section which will discuss service complaints and service methods on the two-boiler soda fountain. Service instructions on the type of soda fountain known as the two-boiler unit will be concluded in next week's instalment.

By Arch Black and Dean C. Seitz

Fig. 1 illustrates the refrigeration hook-up of the most simple two-boiler creamer installation. Before proceeding with a description of the many variations of two-boiler fountains, a summary of the major service complaints, their causes and remedies will be given. It should be kept in mind that the following service information applies only to the two-boiler creamer unit of the type shown in Fig. 1.

Practically all of the complaints which the service engineer will receive from a customer on a soda fountain creamer unit can be divided into seven general classifications:

- (a) Ice cream too soft.
- (b) Ice cream too hard.
- (c) Plain and soda water frozen.
- (d) Plain and soda water too warm.
- (e) Condensing unit runs too long.
- (f) Condensing unit short cycles.
- (g) Suction line frosts back.

(a) Ice Cream Too Soft

Upon receiving a complaint of soft ice cream in a brine soda fountain, the first step for the service engineer is to check accurately the temperature in the brine tank. The temperature should be checked at a point approximately one third up from the bottom of the brine tank.

Many thermometers have been lost by dropping them into soda fountain brine tanks. It is a good practice to attach rigidly a piece of string to your thermometer and tie the end of the string to the draft arm, a syrup pump, or any handy object which will not pass through the brine filler hole.

Brine temperature readings must be taken rapidly as the thermometer is removed from the brine. Never grasp the thermometer by the bulb end, otherwise temperature reading will rise so rapidly that you will not be able to obtain an accurate temperature.

Fig. 1—Hook-Up For Two-Boiler System

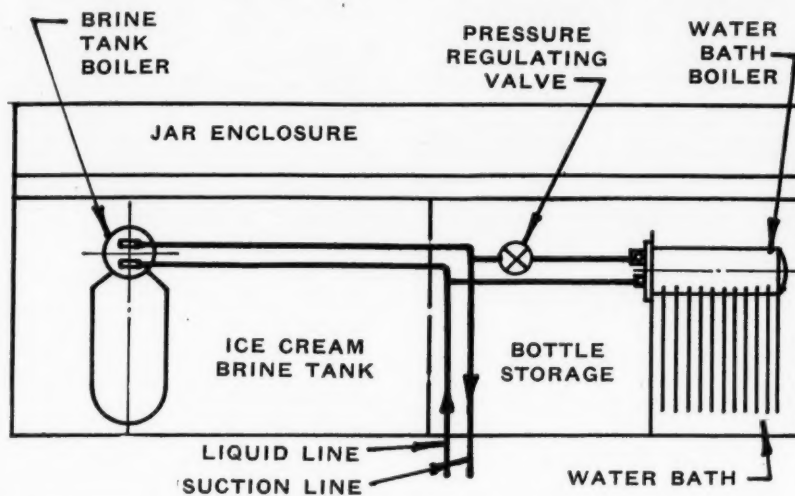


Fig. 2 shows a home-made thermometer holder which will greatly assist in obtaining accurate temperature readings in brine tanks. This handy tool is made by pinching shut the end of a piece of 1/2-inch tubing about 3 1/2 inches long. About 1 1/2 inches from the bottom of the closed end, cut halfway through the tube by means of a hack-saw.

Split the tube from this hack-saw cut up to the top of the open end. By making a small hole through the top of the open end of the tube, a string can be attached. By placing the thermometer in the small cup formed at the closed end of the tube, it will be possible to keep a small amount of brine around the thermometer bulb when the reading is taken.

At a point approximately one third up from the bottom of the brine tank the brine temperature should be between -8° and +3° F. in the

If the cut-out point of the low-pressure switch is too high, the ice cream will become soft. The approximate cut-out point for a sulphur dioxide installation having a full depth brine tank is 15 to 16 inches of vacuum. For a stub brine tank, the approximate cut-out point is between 17 and 18 inches.

If the setting of the low-pressure switch already falls within these limits, the service engineer should not make a change of more than 1 inch (1/2 lb.) at one time. If a greater change is made, it is very likely that the complaint will switch from too soft ice cream into too hard ice cream.

2. LOW-PRESSURE SWITCH CUT-IN POINT TOO HIGH

Remedy—Since the cut-in point of the low-pressure switch is controlled by the pressure in the water bath boiler, the length of the idle cycle of the refrigerating machine is determined by both the amount of ice around the water bath boiler and the cut-in switch setting.

An excessive ice formation (such as 3 to 4 inches thick) combined with a high cut-in setting will increase the idle cycle to such an extent that the brine will become too warm before the condensing unit starts.

On the other hand, a relatively small ice formation (approximately 1/2 inch thick) in combination with a relatively low cut-in point will be the cause of short cycling. The short cycling will produce a lower average brine temperature, causing ice cream to become too hard.

The proper setting is such that the idle cycle will be approximately 30 to 45 minutes. This can usually be obtained with an ice formation regulated to approximately 1 1/2 inches in thickness and a cut-in setting of between 0 lbs. and 3 lbs. for a sulphur dioxide installation.

3. FUSE BLOWN

Remedy—The remedy is to replace the fuse or reset the motor overload protector. Before leaving the installation, the service engineer should determine the cause of the blown fuse. Check the head pressure, the room temperature, and the line voltage.

4. STUCK-OPEN FLOAT VALVE

Before changing the float valve, it is always advisable to flush the valve in case a small piece of dirt may be held under the needle. Many times foreign matter and dirt may be removed by flushing.

To flush the float valve, close the liquid line valve at the condensing unit. Then run the unit for 15 or 20 minutes to pump down partially the refrigerant charge. Next raise the head pressure by covering the condenser on an air-cooled unit, retarding air circulation, or by partially cutting off the water on a water-cooled unit.

After operating the unit for several minutes, open the liquid line valve as widely as possible, in as short a time as possible, so that the liquid refrigerant as it rushes through the needle may wash away the dirt.

After opening all the valves, and checking whether or not the float valve is operating satisfactorily, a final decision can be made on whether or not it is necessary to change the float valve.

There are three cautions which service engineers should remember in changing a float valve. First, the most important point is to eliminate any possibility of moisture getting into the evaporator.

Second, if the float valve has been out in cold weather, it should be

warmed while the evaporator is being pumped down so that it will not be covered with condensation when you are ready to use it. In this same connection keep in mind that the boiler is at a colder temperature than the room when you remove the float valve. Moisture from the air will condense on the inside of the boiler if the operations are not performed rapidly.

Third, never pull the screws holding the boiler header or the suction line valve too tight, for it is possible to shear off these cap screws if too much strength is used.

5. STUCK-SHUT FLOAT VALVE

Remedy—If the float valve is stuck shut, the refrigerant charge in the boiler will be pumped out, producing an excessively high head pressure, and no refrigeration. A proper correction is a complete change of the float valve assembly.

New 'Simplex' Tube, Pipe Vise Announced

URBANA, Ohio—Development of the Simplex tube and pipe vise, designed to facilitate holding of brass and copper tubing and polished pipe without scratching, marring, or flattening, has been announced by Desmond-Stephan Mfg. Co.

Jaws of this vise are recessed for holding 3/8, 1/2, 3/4, and 1-inch tubing, and are lined with a soft alloy. The set of corrugated pipe jaws has a capacity of 1 1/2-inch diameter pipe when the non-marring feature is not required.

The new vise weighs 29 lbs. and is 18 inches high. Its base measures 3 x 10 1/2 inches. List price is \$16, with an additional charge of \$2 for the corrugated pipe jaws.

Appleton Vocational School Adds Service Instruction

APPLETON, Wis.—Instruction in servicing refrigerators, ranges, vacuum cleaners, and other electrical appliances has been added to the curriculum of the Appleton Vocational School this fall. Service men from retail establishments are enrolled in the class, which meets one evening a week.

Gilmer Appoints Walsh

PHILADELPHIA—Philip J. Walsh has been appointed district manager of the Pittsburgh territory for L. H. Gilmer Co., manufacturer of refrigerator belts.

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THE BUYER'S GUIDE

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Note these superior features... balanced refrigeration... temperature control... controlled high humidity... genuine porcelain finish... corkboard insulation... abundant storage space... magnetic display... no-sweat front glass... three-way service cabinet with scale stand, wrapping counter and paper roller, and unit housing.
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52 Years of Service 1886-1938
DISTRIBUTORS WANTED
Write for descriptive literature of entire Percival line. Meets every requirement of the modern food store. Ask for details of profit making franchise and new Percival finance plan.
C. L. PERCIVAL COMPANY DES MOINES IOWA

With IMPERIAL FITTINGS the system remains tight!
THE success of any refrigeration or air conditioning system is absolutely dependent upon tight connections.
Imperial fittings in both S.A.E. flared type and solder type have been especially designed for refrigeration work.
Nuts, tees, elbows and crosses are made from brass forgings and will not crack or split. They are heavier and stronger than the standard S.A.E. fittings and are non-porous, eliminating seepage and season cracking. Tees and elbows have flats for wrench hold. On fittings with female threads made from rod, Imperial uses an extruded bronze rod. This extruded bronze is not subject to season cracking. Imperial solder fittings are forged with the exception of couplings and return bends which are made from drawn seamless copper tube.
Imperial Brass Mfg. Co., 565 S. Racine, Chicago
IMPERIAL Air Conditioning and Refrigeration Products
VALVES • FITTINGS • TOOLS • CHARGING LINES • FLOATS • STRAINERS • DEHYDRATORS
ORDER FROM YOUR JOBBER

Thermometer Holder

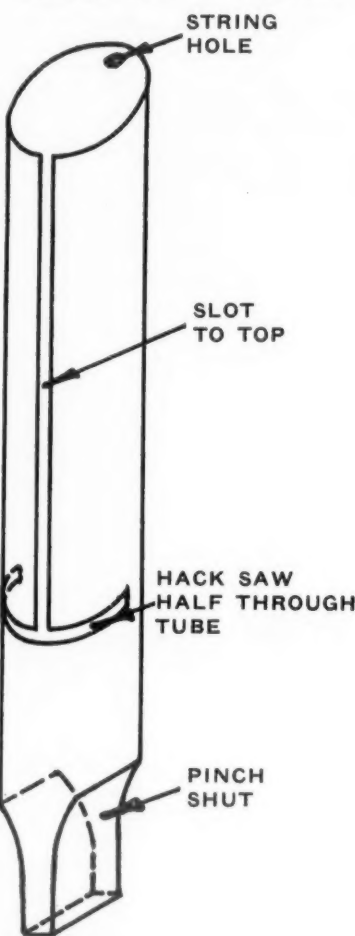


Fig. 2—Drawing showing construction of tubing-holder for a brine thermometer.

average installation. If the bulk ice cream is soft, the temperature reading at this point in the brine tank will probably be in excess of 8° F.

If your check of the system shows that the brine tank temperatures are correct but that the ice cream is soft, it will probably be found that the customer's ice cream was delivered to him in a relatively soft condition, and that it had not as yet had time to harden in the soda fountain tank.

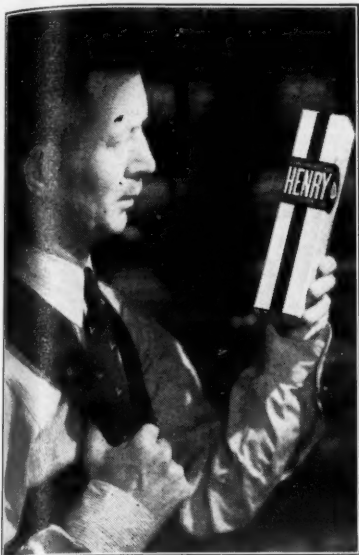
If your investigation reveals that the ice cream is soft, and that the brine temperature is too high, then the following list of causes should be checked and corresponding remedies made.

1. LOW-PRESSURE SWITCH CUT-OUT POINT TOO HIGH

Remedy—On a two-boiler creamer unit, the service engineer must always keep in mind the fact that the condensing unit is started by means of the pressure in the water bath boiler and is stopped because of the reduction of pressure in the ice cream brine tank boiler.

Jobber Activities

Brightens Shelves



J. F. Coyne of the H. Channon Co., Chicago jobber, makes the acquaintance of the Henry Valve Co.'s new carton for dryers, strainers, and small valves. Designed to do a selling job by means of eye appeal, the black and yellow-ochre cartons are varnished to retain their bright appearance on the shelf. Manufacturers of parts and accessories have shown marked tendencies in the past year to give merchandising aids to the jobber.

Vincent Brass & Copper Handles Penn Line

MINNEAPOLIS—Vincent Brass & Copper Co., 100 N. Second St., has been named special representative for Penn Electric Switch Co. products in Minnesota, North and South Dakota, and western Wisconsin.

Headed by R. L. and G. F. Vincent, the company was established in 1936 as factory representative for heating and refrigeration specialties.

An engineer trained at the Penn office and factory in Goshen, Ind. is directing Vincent's control engineering division. Stock of controls and repair parts will be carried in the company's Minneapolis warehouse.

PENN Leads in AUTOMATIC SWITCHES AND CONTROLS
Write for Catalog
PENN ELECTRIC SWITCH CO.
GOSHEN, INDIANA

ICE CREAM CABINETS
Chain Store going out of ice cream business makes possible this unusual opportunity. 50 4-hole portable ice cream cabinets—Freon, 15 Kelvinator 4-hole portable cabinets—methyl chloride. Write to J. Huban
ECONOMY GROCERY STORES
393 D Street, Boston, Mass.

SUPERIOR VALVE & FITTINGS CO.
500-57th ST. PITTSBURGH, PENNA.
Manufacturing a complete line of DIAPHRAGM PACKLESS VALVES, MANIFOLDS, ACCESSORIES AND FITTINGS for the Refrigeration and Air Conditioning Industry.

M&E Compressors
EST. 1866
MERCHAND & EVANS CO.
Phila., Pa., U.S.A. Plant at Lancaster, Pa.

West Coast Jobbers Meet Dec. 10-11

(Concluded from Page 1, Column 4)
men on current problems will be an important part of the meeting, and round-table discussions will follow each address.

West Coast jobbers will meet on the forenoon of Dec. 10, and again from 9 to 11 a.m. on Sunday, Dec. 11, to discuss problems of mutual interest. All meetings will be held in the Whitcomb hotel.

Peter H. Askew, of Refrigeration Supplies Distributors, is president of the Pacific Coast jobber association; first vice president is R. L. Hinshaw, of Hinshaw Supply Co., Sacramento, Calif.; second vice president, Harold Stearns, Refrigerative Supply, Inc., Seattle; secretary, Clarence F. (Sandy) Pratt, California Refrigerator Co., San Francisco; and treasurer, B. E. Watters, Pacific Metals Co., Ltd., San Francisco.

Central Service Supply To Open Branch

SYRACUSE, N. Y.—Central Service Supply Co., refrigeration and stoker supply jobber of Scranton, Pa., has announced that it will open a branch store at 409 E. Jefferson St. here on Dec. 1, with Ray Coonrad, who has been calling on the local trade for three years, in charge. Complete stock will be carried here as in the headquarters at Scranton.

W. E. Jones, one of the company's Scranton salesmen, has been promoted to manager of the Scranton outlet. T. I. Glou will continue as general sales manager of the firm, handling matters of company policy and contacts with manufacturers.

New Diaphragm Valve Introduced By Mueller

PORT HURON, Mich.—A new "Tripl-Seal" diaphragm-type refrigeration line valve recently has been put on the market by Mueller Brass Co. here.

Said to be constructed upon a new principle, the line valve is operated by means of four levers. When the handle is turned, the diaphragms move downward slightly, contacting the lever plate, which in turn causes the levers to multiply the travel of the stem in an approximate ratio of three to one in opening or closing the valve.

Because of the small amount of movement, the multiple diaphragm, which is said to have approximately 20% increased surface area over other types of diaphragms, is never deflected past its normal center. This, it is claimed, greatly prolongs the valve's life.

In conventional diaphragm operation, it is said, the diaphragm operates through and beyond its center point. Continued operation is said to fatigue the metal at its edges, where it is secured in the valve.

A single turn only is necessary to open or close the new Mueller valve, it is said.

Positive sealing at three essential points in the valve is provided for—a back seat with valve in open position, the multiple diaphragms, and a packing around the stem. Packing is said to insure constant seal between pressure lines and diaphragm chamber.

Stem of the valve is provided with a 60-degree bevel, to secure a wedging action for positive and easy closing. It is manufactured from a corrosion-resistant alloy. The stem does not rotate, and is guided into the same position against the seat by a cylindrical guide, processed to eliminate distortion.

Body and cap of the valve are forged brass, to eliminate seepage, and to withstand frost action; mounting lugs are forged integrally with the body, to provide greater mounting strength.

Hand wheel is designed so as to provide a convenient grip for manual operation. Valves are furnished in two-way, three-way, and angle type.

Handles Valve Line



E. V. Dunbar, recently appointed representative of Superior Valve & Fittings in 7 southern states.

New Catalog Lists Variety Of Fastening Devices

CHICAGO—Manufacturers Screw & Supply House has just issued a new catalog giving specifications and list prices of the various types of screws, eyelets, washers, nuts, rivets, bolts, terminals, and other fastening devices which it handles.

The catalog's table of contents is headed "Index of 100,000 Gadgets."

'Sandy' Pratt To Sell Grunow Parts

SAN FRANCISCO—California Refrigerator Co., refrigeration and air-conditioning parts and supplies jobber, has been appointed jobber of authorized Grunow refrigerator parts in northern California and vicinity, reports Clarence F. Pratt, president of the company.

The company has purchased the stock of Grunow compressors, parts, and accessories owned by George H. Eberhard Co., formerly Pacific Coast distributor for General Household Utilities Co., which has taken on distribution of Spanton products.

About 13,000 Grunow refrigerators are now in use in this territory, Mr. Pratt says.

Jas. P. Marsh Corp. Names Representatives

CHICAGO—Jas. P. Marsh Corp., Chicago manufacturer of steam specialties, gauges, thermometers, industrial instruments, and venting valves, has announced appointment of seven new representatives in six states, as follows:

Sanderson-Smith Co., Philadelphia; Laurence Trant & Co., Norfolk, Va.; New Mexico Heating Specialty Agency, Albuquerque, N. M.; P. F. Miremont, New Orleans; John A. Dodd, Atlanta; Eshelman & Potter, Birmingham, Ala.; R. G. Titherington, New Orleans.

Agent In Texas



D. J. BOWEN

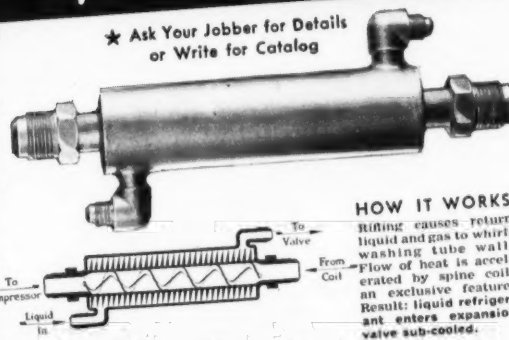
DALLAS, Tex.—Headquarters of D. J. Bowen, manufacturers' agent for several companies in the refrigeration and air-conditioning equipment field in Texas, Oklahoma, Arkansas, and Louisiana, have been established at 2211 Commerce St. here.

Mr. Bowen recently has been named representative in those four states for Penn Electric Switch Co.'s line of controls for refrigeration, air conditioning, heating, and pump and air compressors, according to R. H. Luscombe, Penn sales manager.

THE BUYER'S GUIDE

PEERLESS Capacity Booster

★ Ask Your Jobber for Details or Write for Catalog



Raises Operating Back Pressures Increases Coil Capacity

• The Peerless Capacity Booster is a simple, inexpensive unit which will raise the efficiency of any commercial installation, regardless of size. When installed it eliminates "flash gas," and makes every foot of cooling surface work at 100% efficiency. This is accomplished through the sub-cooling of liquid refrigerant by means of returned gas and unevaporated liquid passing through the suction line. It's a natural for picking up extra profits.

PEERLESS OF AMERICA INC.
MAIN FACTORY • GENERAL OFFICES
515 West Thirty-fifth Street, Chicago

New York Factory
43-20 34th Street
Long Island City
Pacific Coast Factory
3000 S. Main Street
Los Angeles
Export Division:
P. O. Box 436, Detroit
Michigan, U. S. A.

Copies of Air Conditioning & Refrigeration News Bound for Reference Use

Copies of Air Conditioning & Refrigeration News (formerly Electric Refrigeration News) for the past five years are available in bound books. These volumes, each covering a four-month period, are bound in a stiff paper board cover (\$3.00 each) or in black imitation leather (\$5.00 each). Prices f.o.b. Detroit.

Vol. 8—Jan. 4 to April 26, 1933.
Vol. 9—May 3 to Aug. 30, 1933.
Vol. 10—Sept. 6 to Dec. 27, 1933.
Vol. 11—Jan. 3 to April 25, 1934.
Vol. 12—May 2 to Aug. 29, 1934.
Vol. 13—Sept. 5 to Dec. 26, 1934.

Vol. 14—Jan. 2 to April 24, 1935.
Vol. 15—May 1 to Aug. 28, 1935.
Vol. 16—Sept. 4 to Dec. 25, 1935.
Vol. 17—Jan. 1 to April 29, 1936.
Vol. 18—May 6 to Aug. 26, 1936.
Vol. 19—Sept. 2 to Dec. 30, 1936.

Vol. 20—Jan. 6 to April 28, 1937.
Vol. 21—May 5 to Aug. 25, 1937.
Vol. 22—Sept. 1 to Dec. 29, 1937.
Vol. 23—Jan. 5 to April 27, 1938.
Vol. 24—May 4 to Aug. 31, 1938.

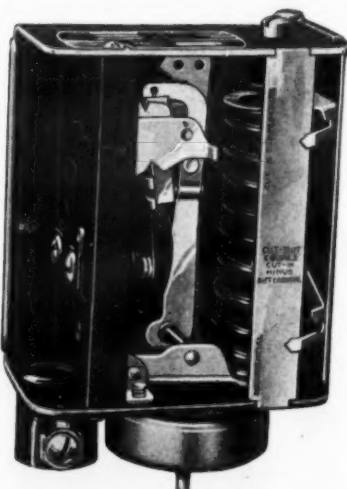
Shipment will be made by express collect unless otherwise specified.

A Handy Binder for Current Issues of the News

We offer a binder designed and made especially for keeping your current file copies of Air Conditioning & Refrigeration News neat and always available for ready reference.

The price is \$3.75 shipped to you postpaid in the United States and Possessions and Pan-American Postal Union countries. For all other countries, postage based on a shipping weight of six pounds must be added to the price. Send your remittance with order.

Business News Publishing Company, 5229 Cass Avenue, Detroit, Michigan



For All Commercial Applications—RANCO Type "G"

A SIMPLE, compact commercial control. Completely new — completely dependable. High capacity — 1-1/2 H.P. 110-220 V., A.C.; 3/4 to 1-1/2 H.P. 115-220 V., D.C. Made with stainless steel springs and toggle mechanism. Maintains accurate settings.

Ranco Type "G" Control is designed for all commercial applications. Important new features!

Write for Bulletin

Ranco INC.,
Columbus, Ohio, U.S.A.

QUESTIONS

Seeks Insulation Data For Cold Storage Rooms

No. 3321 (Dealer, Florida)—"Please be kind enough to ask that manufacturers of portable cold storage rooms send me complete information and prices as well as manufacturers of insulation material send me specifications, prices, and recommendations for a built-in cooler."

Answer: We are not quite sure as to just what you mean by "portable cold storage room," however we are giving you the following list of manufacturers of walk-in refrigerators who may be able to fill your needs:

Fogel Refrigerator Co.
16th & Vine Sts., Philadelphia, Pa.
B. Gloeckner Mfg. Co.
429 Fourth Ave., Pittsburgh, Pa.
C. V. Hill & Co.
360 Pennington Ave., Trenton, N. J.
Cincinnati Butchers' Supply Co.
1972 Central Ave., Cincinnati, Ohio
Koch Butchers' Supply Co.
14th & Gentry, N. Kansas City, Mo.
M. Leitner & Co.
2322 Ogden Ave., Chicago, Ill.
Ottensheimer Bros., Inc.
1001-45 N. Montford Ave., Baltimore, Md.
C. L. Percival Co., Inc.
W. 11th & Cherry Sts., Des Moines, Iowa.
Seeger Refrigerator Co.
850 Arcade St., St. Paul, Minn.
Sherer-Gillett Co.
S. Kalamazoo Ave., Marshall, Mich.
Tyler Fixture Corp.
900 Wayne St., Niles, Mich.

The following are manufacturers of insulation for such a refrigerator:
Armstrong Cork Products Co.
Lancaster, Pa.
Cellulose Corp.
66th & La Vergne, Chicago, Ill.
Celotex Corp.
919 N. Michigan Ave., Chicago, Ill.
Cork Insulation Co., Inc.
155 E. 44th St., New York, N. Y.

Dry-Zero Corp.
Merchandise Mart, Chicago, Ill.
Johns-Manville Corp.
40 E. 40th St., New York, N. Y.
Kimberly-Clark Corp., Neenah, Wis.
Pacific Lumber Co.
100 Bush St., San Francisco, Calif.
Wood Conversion Co.
360 N. Michigan Ave., Chicago, Ill.

Number of Makers Of Refrigerators

No. 3322 (Publishing Firm, Ohio)—"I wonder if you would be kind enough to help us secure an estimate of the number of mechanical refrigeration manufacturers who have marketed a refrigerator."

Answer: We in this office are regular readers of your publication, and in securing an estimate of this kind feel that your records would probably be complete enough to give us an approximate figure."

Answer: In the Sept. 5, 1934 issue of REFRIGERATION NEWS, there was published a list of all the companies who had manufactured refrigerators up to that time and who had gone out of business.

We have also published the 1938 Air Conditioning & Refrigeration Directory which lists all manufacturers of electric household refrigerators now doing business.

Between these two sources you should get a fairly accurate count on the number of companies who have manufactured refrigerators since very few concerns have gone out of business in the last three years.

The Sept. 5, 1934 issue may be had at a cost of 10 cents. The Directory is now reduced to 50 cents.

Where To Obtain Grunow Parts

No. 3323 (Service Engineer, Louisiana)—"Please send me Service Manuals 1, 2, and 4 of Household Refrigeration."

"Can you tell me where to get parts for a Grunow box?"
Answer: Write to the Grunow Authorized Service, Inc., 4315 W. Fullerton Ave., Chicago, Ill. for all information about Grunow parts.

List of Stoker Manufacturers

No. 3324 (Dealer, Pennsylvania)—"Can you furnish a list of manufacturers of stokers?"

Answer: The following are some of the principal manufacturers of stokers:

Anchor Stove & Range Co.
Third & Culbertson Ave., New Albany, Ind.
Bluffton Mfg. Co., Findlay, Ohio.
Butler Mfg. Co.
13th & Eastern, Kansas City, Mo.
Butler Street Foundry & Iron Co.
3424 Normal Ave., Chicago, Ill.
Canton Stoker Corp.
929 Andrews Place S. W., Canton, Ohio.
Combustioneer Div.
Steel Products Eng. Co.
Springfield, Ohio.
Cotta Transmission Corp.
2340 11th St., Rockford, Ill.
Eddy Stoker Corp.
4717 West North Ave., Chicago, Ill.
Electric Furnace-Man, Inc.
7 Dey St., New York, N. Y.
Fairbanks, Morse & Co.
900 S. Wabash St., Chicago, Ill.
Gehl Bros. Mfg. Co., West Bend, Wis.
Hoffman Combustion Eng. Co.
Marquette Bldg., Detroit, Mich.
Holcomb & Hoke Mfg. Co.
1545 Van Buren St., Indianapolis, Ind.
Iron Fireman Mfg. Co.
3170 W. 106th St., Cleveland, Ohio.
Kelvinator Div.
Nash-Kelvinator Corp.
14250 Plymouth Rd., Detroit, Mich.
Kol-Master Corp., Oregon, Ill.
Link-Belt Co., Stoker Div.
2410 W. 18th St., Chicago, Ill.
Morse Chain Co.
P. O. Box 98, Ithaca, N. Y.
Muncie Gear Works, Inc.
North Vine St., Muncie, Ind.
Pocahontas Fuel Co.
12415 Cedar Rd., Cleveland, Ohio.
Schwitzer-Cummins Co.
1125 Massachusetts Ave., Indianapolis, Ind.
Seavage Corp.
316 E. Main St., Richmond, Va.
Sinker-Davis Co.
230 S. Missouri St., Indianapolis, Ind.
Whiting Corp.
15669 Lathrop, Harvey, Ill.
Will-Burt Co., Orrville, Ohio.
Winkler Mfg. Co.
609 E. Walnut St., Lebanon, Ind.

Canadian Sales Statistics Wanted

No. 3325 (Manufacturer, Ohio)—"In the REFRIGERATION NEWS of July 8, 1936, there was an article referring to estimates of sales of household electric refrigerators in the Dominion of Canada during 1934 and 1935."

"Have similar estimates been made regarding sales of household electric refrigerators in the Dominion of Canada in 1936 and 1937? If so, could you please advise what these sales estimates were. Could you also please advise the number of ice refrigerators sold in the fiscal year ending July 31, 1938?"

Answer: We do not believe that we have made any estimates in the last two years of the total household refrigerator sales made in the Dominion of Canada.

However, we are sending you a folder of statistics which is a supplement to the 1935 Refrigeration & Air Conditioning Market Data Book. This sells for 50 cents.

In this folder will be found figures of sales made by the Nema manufacturers in Canada, and also in the U. S. covering figures on exports.

Between these two you should be able to estimate the total number of refrigerators exported to Canada and figure this to be 75% of the total number sold.

Who Makes Window Box Ventilators?

No. 3326 (Utility Company, New Hampshire)—"Will you please send us the names of the concerns that manufacture window type box ventilating systems which include filters, blower, and motor assembly all in one unit?"

Answer: The following companies are manufacturers of window type box ventilating systems:

Berger Mfg. Co., Canton, Ohio.
H. J. Somers, Inc.
6063 Wabash Ave., Detroit, Mich.
Kauffman Air Conditioning Co.
4336 W. Pine Blvd., St. Louis, Mo.
Airtemp, Inc.
1119 Leo St., Dayton, Ohio.

Address of Gas Appliance Association

No. 3327 (Exporter, New York)—"Can you tell me the address of the Association of Gas Appliance & Equipment Manufacturers?"

Answer: Address the Association of Gas Appliance & Equipment Manufacturers at 60 E. 42nd St., New York, N. Y.

What Is Address of 'Laundryette' Maker?

No. 3328 (Dealer, Nebraska)—"Please advise whether the makers of the old Laundryette electric washer are still in business and if not, where repairs can be obtained?"

Answer: We are referring your inquiry to the American Washing Machine Manufacturers Association, 80 E. Jackson Blvd., Chicago, Ill. as we do not have this information and it is possible that they may have it.

Books on Tool & Die Making

No. 3329 (Reader, California)—"I am in receipt of a list of refrigeration publications offered by you and would be interested to know whether you can also furnish books on Tool and Die Making Practice suitable for a trade school text?"

Answer: We do not publish any books on tool and die making. We note, however that the American Technical Society, Drexel Ave. at 58th St., Chicago, Ill., publishes a book entitled "Tool and Die Design" by Cole-Curtis, and suggest you get in touch with them.

You might also contact the Special Tool, Die & Machine Shop Institute, 215 Fairmount-Cedar building, Cleveland, Ohio. Possibly they also will have something to offer you.

Manufacturers of Electric Churns

No. 3330 (Dealer, Kentucky)—"We would appreciate very much your advising us the names of manufacturers of electric motor churns."

Answer: We would suggest that you write to the Dairy & Ice Cream Machinery & Supplies Association, Inc., 232 Madison Ave., New York, N. Y., for information about the manufacturers of churns.

G-E Nine-Month Sales Are Down 26%

SCHENECTADY, N. Y.—Sales billed by General Electric Co. during the first nine months of 1938 amounted to \$192,501,173, compared with \$260,773,533 during the corresponding period of 1937, a decrease of 26%, President Gerard Swope announced.

Profit available for dividends for the first nine months this year amounted to \$17,548,256, compared with \$39,663,931 for the first nine months last year, a decrease of 56%. This profit for nine months is equivalent to 61 cents a share of common stock, compared with \$1.38 a share in the same period last year.

Dividends aggregating 50 cents a share were paid for the first half of the year, and an additional 20 cents a share was paid on Oct. 25 for the third quarter, or a total of 70 cents a share for the first nine months, compared with \$1.20 a share paid for the corresponding period last year.

Orders received during the nine months ended Sept. 30 amounted to \$188,756,958, compared with \$305,276,556 for the corresponding period in 1937, a decrease of 38%. On Sept. 23, the number of stockholders was 208,805, compared with 197,104 in September last year, an increase of 5.9%.

Sales Promotion Agency Opens N. Y. Office

NEW YORK CITY—Belnap and Thompson, Inc., self-styled "sales promotion agency" with headquarters in Chicago, has opened offices in the Graybar building here to make possible closer contact with eastern clients.

Claiming to be the first agency of its kind, Belnap & Thompson already numbers among its patrons such firms as Sinclair Refining Co., U. S. Tire & Rubber Co., Kraft-Phenix Cheese Corp., Coca Cola Bottling Co., Abbott Laboratories, and Jewel Tea Co.

Cowles Named Sales Head

MEMPHIS, Tenn.—C. B. Cowles has been named sales manager of the Frigidaire department of Southern Appliance Co.

CLASSIFIED ADVERTISING

RATES: Fifty words or less in 6-point light-face type only, one insertion, \$2.00, additional words four cents each. Three consecutive insertions \$5.00, additional words ten cents each.

PAYMENT in advance is required for advertising in this column.

REPLIES to advertisements with Box No. should be addressed to Air Conditioning & Refrigeration News, 5229 Cass Ave., Detroit, Mich.

POSITIONS WANTED

FACTORY REPRESENTATIVE, engineering graduate, 14 years' successful experience in oil burners and refrigeration, seeks connection with a reliable manufacturer. Thoroughly familiar with New England and Middle Atlantic territory. Commission basis possibly acceptable. Box 1085, Air Conditioning & Refrigeration News.

SERVICE and installation man: Four years with nation's second largest Kelvinator distributor. Experienced on entire line to twenty horsepower. Served one season as junior engineer. Twenty-eight, married, four dependents, own car and tools. References from above mentioned firm. Go anywhere, work any make. F. M. BARRELL, 1512 Garland, Wichita, Kansas.

POSITION WITH large refrigeration or air conditioning corp. Ten years' practical experience in service work, mostly commercial. Frigidaire factory trained, I.C.S. graduate on refrigeration, also air conditioning. Can do drawing. Best of references, willing to travel. Thirty-three years old, in best of health. Experience in selling. Box 1086, Air Conditioning & Refrigeration News.

SALES EXECUTIVE available December 1st. Ten years of wholesale and retail sales experience on major home appliances including promotion, advertising and personnel supervision. Fluent and effective speaker. Remuneration secondary to advancement opportunity. Box 1087, Air Conditioning & Refrigeration News.

UNIT MANUFACTURERS Note: Graduate engineer with extensive experience in a responsible capacity in the design and manufacture of complete line of unit air conditioning equipment desires new connection. For further details address Box 1089, Air Conditioning & Refrigeration News.

BUSINESS OPPORTUNITIES

LARGEST, LEADING electrical appliance store in Alton, Illinois, with a trading population of 125,000, with exclusive franchises on leading lines of products, namely, household and commercial refrigeration products, air conditioning and heating equipment, stokers, oil burners and a full line of electrical appliances; also an active and paying service department; owner forced to leave city. For complete information write Box 1084, Air Conditioning & Refrigeration News.

EQUIPMENT FOR SALE

DUE TO the strict policy of handling Servel equipment exclusively, MAJESTIC REFRIGERATOR CORPORATION is offering the trade for quick disposal one hundred assorted used machines received as trade-ins. These machines are of various sizes and makes, including Frigidaire, Kelvinators, Copeland, etc. Priced low. Send at once for complete list. 333 West 52nd St., New York, N. Y.

REPAIR SERVICE

DOMESTIC CONTROLS repaired: Ranco pencil \$1.75, Ranco box \$2.00, General Electric \$2.00, Tag \$2.00, Cutler-Hammer \$2.00, Penn \$2.00, Bishop Babcock, \$2.50, Majestic \$2.50, Penn magnetic \$2.50, G. E. Frigidaire \$2.50. In business over 20 years. Our name is our guarantee. UNITED SPEEDOMETER REPAIR CO., INC., 436 West 57th Street, New York City.

ELECTRIC MOTOR repairing, armature and stator rewinding on all refrigeration and air conditioning motors, A.C. or D.C. Pick-up and delivery service. All work guaranteed. Motors bought and sold. Burnt out motors bought. Prices on request. COMMERCIAL MOTOR SERVICE CO., 601 West 26th St., New York, N. Y.


GENERAL ELECTRIC and Westinghouse hermetic units rebuilt. Guaranteed unconditionally for one year and returned to you finished like new. Units are entirely disassembled in our large modern shop, tested through every step of production during rebuilding with the most complete test equipment for accurate running tests under actual operating conditions. Each unit measures to exacting standards after rebuilding. Prices \$30.00 on General Electric DR-1, DR-2, and Westinghouse; \$35.00 on General Electric DR-3. Quotations furnished on other models. Quick service—guaranteed work. REFRIGERATION MAINTENANCE CORP., 321-27 East Grand Avenue, Chicago, Ill.

CONTROL REPAIR service. Your controls repaired by expert mechanics, with special precision equipment. Supervised by graduate engineers. We stress perfection and dependability before price. One year guarantee on domestic controls. Any bellows operated device repaired. HALETRIC LABORATORY, 1793 Lakeview Road, Cleveland, Ohio.

PATENTS

HAVE YOUR patent work done by a specialist. I have had more than 25 years' experience in refrigeration engineering. Prompt searches and reports. Reasonable fees. H. R. VAN DEVENTER (ASRE), Patent Attorney, 342 Madison Avenue, New York City.

THE BUYER'S GUIDE

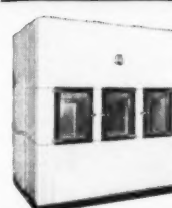


TYLER

WELDED STEEL Refrigerators

● DEALERS who have the Tyler line are making surprising sales records. Tyler's welded steel construction and big values offer a tremendous advantage. Complete line. Unlimited prospects. Top Display... Double Duty... Delicatessen Cases... Reach-ins... Walk-ins. Wide range of sizes. Beautiful, modern, streamlined designs. Latest engineering improvements. Write now for dealer catalog.

TYLER FIXTURE CORPORATION., Dept. E, Niles, Mich.
New York Office: 601 W. 26th St. Chicago Office: 1663 W. Ogden Ave.

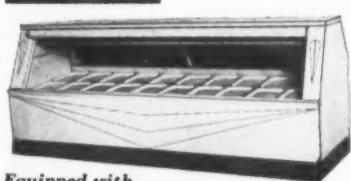


SIZES AND TYPES TO TAKE CARE OF EVERY PROSPECT

MILLS COMPRESSORS for Commercial Use

Mills Novelty Company • 4100 Fullerton Avenue • Chicago, Illinois

YEARS OF TROUBLE-FREE SERVICE



Equipped with Famous Fogel Lifetime Vision

The framework—insulation—porcelain finish—coils—hardware—display glasses—and every other part of a Fogel case is engineered and constructed for lifetime dependability and service. This guarantees satisfaction for the owner and goodwill for the distributor. Inquire today about our full line of refrigerated food storage and display equipment. Interesting distributor proposition to qualified firms.

FOGEL REFRIGERATOR COMPANY SINCE 1899
16th & Vine Sts., Phila., Pa.

4450 models of refrigerators 247 makes of air-conditioners, etc.

Gilmer jobbers everywhere, with full stocks, guarantee you fast emergency service.

All Gilmer Belts listed, by lengths, manufacturers' part numbers, cross-sections, in "America's Belt Bible," the Gilmer Catalog. Get your FREE COPY today.

L. H. GILMER COMPANY, Tacony, Philadelphia

GILMER MAKES THE BELTS THAT FIT



Service News

Service Men Suggest Changes In Proposed Detroit Code on Qualifications For Licenses and In Many Other Provisions

DETROIT—Some 22 suggested revisions of the proposed refrigeration code for the city of Detroit have been submitted to the city's refrigeration code committee by a three-man board representing local service men and installers of refrigeration equipment.

These changes, endorsed by more than 150 Detroit service men, have been taken under advisement by the city committee and will be discussed further at a future meeting of the two groups.

H. C. Cuddebach, Frank Houston, and J. E. Perry compose the committee representing the service men and installers in conferences with the city code committee.

Suggested code changes follow:

In paragraph 1.1 of section 1, where the code as originally drafted provides that licenses to install, alter, and service refrigerating systems shall be issued upon recommendation of the Commission of the Department of Buildings and Safety Engineering, the service men would instead place responsibility for license recommendations upon a five-man Board of Examiners appointed by the Mayor, three being from the Department of Safety Engineering, one a Master Refrigeration Contractor, and one a Journeyman from the trade.

In this same section and paragraph, the sub-paragraph pertaining to the qualifications for obtaining a license has been changed completely by the proposed revisions. Instead of the three years of service and installation experience (two years for graduates of recognized refrigeration schools) required under the original code, the service group desires to raise this qualification to four years (three for refrigeration school graduates). Further, the revised paragraph, as drawn up by the service men's code committee, provides that:

QUALIFYING FOR LICENSE

"Every person, firm, or corporation who desires to become a journeyman refrigeration mechanic or a Master Refrigeration Contractor in the City of Detroit, shall comply with requirements as herein set forth. He shall apply to the Board of Examiners of the Department of

Buildings and Safety Engineering, and, upon payment of a fee determined by said Department, shall present himself for examination at the place and time designated by said Board. If declared competent by said Examining Board after examination, he shall register his name and address in the book of registration provided for that purpose in the office of the Board, stating his full name and residence, and shall procure from said Board the regular license to practice as journeyman or Master Refrigeration Contractor, as the case may be, in the City of Detroit.

"Every firm or corporation must have actively engaged in its employ a licensed refrigeration contractor, who, at the discretion of the Board of Examiners, may hold the license for the duration of his employment, in the name of said firm or corporation, the firm or corporation to be fully responsible for his acts or actions.

FORM OF APPLICATION

"Application for a license as a journeyman or Master Refrigeration Contractor will be received by the Clerk of the Board who will furnish the applicant at the time of the examination with a list of questions which must be answered in writing. The applicant shall state, on oath, in his own handwriting, that he is the party directly interested in the license, giving his full name and address, his term of residence in the City, and the names of the persons, firms, or corporations in whose service he has been. He shall also state his business or employment during the five years immediately preceding the date of application as well as the number of years during which he has been engaged in the business, trade, or calling of a refrigeration mechanic.

70% IS PASSING GRADE

"The examination shall be of such a character as to test the fitness and qualifications of the applicant for the trade, business, or calling of a journeyman or Master Refrigeration Contractor, and the applicant must have a standing of at least 70% in his examination to be entitled to a license.

"Falsehood or fraud shall be sufficient cause for refusal of his certificate, together with the dismissal of his application. Upon failure to pass the required examination, together with the above, another will not be granted until after the expiration of three months from the date of examination, during which time he shall not do work as a journeyman."

Paragraph 1.15 of section 1 concerns the issuing of permits for specific installations or major replacements. In the original code, this paragraph concluded with this provision: "permits will not be required on the installation, alteration, or major replacement and use of refrigerating system in single or two family residences, or for new unit systems containing not more than six (6) lbs. of refrigerant in Residential Occupancies."

PERMIT QUESTION

In place of this provision, the service men recommend that the paragraph be concluded thus: "permits will not be required on systems requiring annual inspection or systems covered by the manufacturer's warranty on service replacements. Nothing in this paragraph is to be construed to mean installations or service of unit systems containing not more than four (4) lbs. of refrigerant."

In paragraph 1.45 of section 1, which prohibits sale of toxic, irritant, or flammable refrigerants to anyone but licensed contractors or persons having a permit from the Department of Buildings and Safety Engineering, the service men would insert a further provision that such

refrigerants "shall not be sold or purchased except in cylinders conforming to I.C.C. regulations."

Under paragraph 1.55 of the same section is given a list of definitions, to which the service men would add the following: "A Journeyman refrigeration mechanic is a person who performs the manual work of installing and servicing refrigeration systems under the direction of a Master Refrigeration Contractor, and who holds a Journeyman's Refrigeration License."

In section 4, which classifies refrigerating systems by type, the service men suggest addition of two definitive paragraphs as follows:

"Paragraph 4.25—Multiple System: The term 'Multiple' refrigerating system shall mean and include all systems in which the refrigerant from a common source is delivered to two or more separate cabinets, each containing one or more evaporators.

"Paragraph 4.35—Single Remote System: A single remote system is one compressor connected to one fixture, containing one or more evaporators."

WANT RESTRICTIONS REMOVED

In section 6, paragraph 6.21 prohibits use of refrigerating systems containing more than 20 lbs. of a Group 1 refrigerant in kitchens, laboratories, and mortuaries. The revision proposed by the service group would raise this maximum to 50 lbs.

Paragraph 6.22, section 6, which reads: "Refrigerating Systems containing more than twenty (20) pounds of a Group (1) refrigerant shall be of the indirect type with all refrigerant containing parts installed in a Class 'T' machinery room." The installers and service men would change this to read: "Air-conditioning systems containing . . ."

The service men's code committee completely revamped paragraph 6.30 of section 6. The original version: "Group (2) refrigerants shall not be used except that unit systems containing not more than six (6) pounds of refrigerant may be used in kitchens, laboratories, or mortuaries." The revised version: "Group (2) refrigerants, other than ammonia and sulphur dioxide, when used in multiple or unit systems containing not more than 30 pounds of refrigerant with an approved tracer, may be used in kitchens, laboratories, or mortuaries."

LIBERALIZE REFRIGERANT USE

Paragraph 7.30 of section 7 restricts the use of Group 2 refrigerants in any application, but the service men would limit their use only when employed for air conditioning. In a note added to this paragraph, the original code read: "This (meaning the restrictions on Group 2 refrigerants) shall not be construed to cover new unit systems containing not more than twelve (12) pounds of a Group (2) refrigerant intended for display, demonstration, and sale . . ." The service men would revise this to read: "This shall not be construed to cover multiple or unit systems containing not more than thirty (30) pounds of a Group (2) refrigerant intended for commercial occupancy or for display, demonstration, and sale . . ."

Section 8 deals with residential occupancies, paragraph 8.30 limiting the amount of Group 2 refrigerant usable in sleeping rooms. The service men want to make these limitations applicable only when the Group 2 refrigerant is used in an air-conditioning system.

To paragraph 8.31, which restricts the use of Group 2 refrigerants in human comfort air-conditioning applications, the service men suggest addition of the following: "This shall not be construed to cover multiple or unit systems containing not more than twenty (20) pounds of Group (2) refrigerants intended for commercial use."

Section 11 of the code deals with installation requirements. Paragraph 11.20 reads: "All connections made with the public water supply shall be in accordance to the State of Michigan and City of Detroit Plumbing Code and Regulations." Installation and service men would strike out the last two words—"and Regulations."

This same deletion is suggested in paragraph 11.21 of the same section, which has to do with installation of discharge water lines.

ON JOINTS AND FITTINGS

From paragraph 12.24 of section 12, the code committee representing the service men struck out two pass-

ages dealing with the requirements and qualifications of joints and fittings. The paragraph is here quoted as originally set up, with suggested deletions indicated by brackets:

"Threaded joints on copper or brass pipe (I.P.S.) shall be made with extra heavy brass fittings of material conforming to A.S.T.M. specification No. B-62-36 with revisions. Joints on annealed copper tubing (not exceeding 3/4 inch outside diameter) may be made with flared compression fittings of approved type, provided that all such fittings shall be exposed for visual inspection. Joints on hard drawn copper tubing, if of the full sweated capillary type, shall be made with an alloy having a melting point [greater than 1,000° F. or with a solder melting at a point] below 500° F. and above 350° F. Fittings used in sweated capillary joints shall be cast red brass or die stamped brass or copper, forged or wrought brass or copper or extruded brass or copper [when used with a solder having a melting point below 500° F. and above 350° F. and shall be of an approved type of fast-holding or mechanical joint which will make up mechanically tight without solder, the solder being used only as a seal]."

CLARIFY SAFETY DEVICES

Final changes proposed by the service men's committee were the addition of the following two paragraphs, pertaining to commercial application, to section 12:

Paragraph 12.53: On multiple systems, stop valves with fixed means of operation shall be required at the following locations: Inlet and outlet connection of each fixture and in the risers or manifold connections at or near the compressor.

"Paragraph 12.54: Single remote systems containing more than six pounds of refrigerant shall have stop valves of fixed means of operation in the risers at or near the compressor."

Alarm Feature Added In Penn Series of Controls

GOSHEN, Ind.—An alarm feature, to warn attendants when refrigeration equipment fails to maintain desired low temperatures, has been added to the "260 Series" semi-commercial refrigeration controls built by Penn Electric Switch Co.

Designed primarily for ice cream cabinet service, the over-run alarm will be offered as optional construction on all "260 Series" temperature models.

These controls have auxiliary contacts which close 5 to 10° (as specified) above the control cut-in point, to sound a bell or light a signal lamp. They are rated for alarm duty only, while the main contacts, of the Penn permanent magnet type, carry motor loads up to 3/4 hp. a.c. and 1/2 hp. d.c.

Addition of the alarm feature is said to involve no change in the dimension of the switches, making them applicable where space is limited. Mounted by feet or angle bracket, the controls may be installed in insulation space or any other desirable location, it is claimed.

Ever-Ready Moves Trenton Quarters

TRENTON, N. J.—Headquarters of Ever-Ready Refrigeration Service has been moved to 14 S. Montgomery St. here. The firm maintains 24-hour service facilities.

Byars Establishes New Repair Service

SCHUYLER, Neb.—L. L. Byars, formerly of David City, has established a complete household appliance and radio repair shop in the Plymouth garage building here.

THE BUYER'S GUIDE



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SILVER SOLDER BOND
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Stoker News

September Sales of Stokers Break Record For Any One Month

WASHINGTON, D. C.—Sales of domestic, commercial, and industrial stokers reported by the Bureau of Census, Department of Commerce here, reveal a total for September of 20,452 units, marking an all-time high for a single month in the history of automatic stoker marketing.

Closest approach to the September total came in the same month of 1937 when 19,193 units were sold, and in October, 1936, when 18,371 stokers were delivered by the manufacturers.

Total sales, January through September, show a volume of 65,568 units, slightly under 73,743 sold in the same period of 1937, but well above the 1936 total of 52,876 stokers.

Sales of anthracite stokers continue to show the greatest percentage of gain in any classification, as 2,921 units were sold in September of this year, a figure nearly double the 1,754 stokers sold in the same month of last year.

Kalamazoo Engineers To Study Stokers

KALAMAZOO, Mich.—Small power plant, underfeed stokers, and stoker engineering will be discussed during a fuel engineering conference sponsored by Kalamazoo valley region engineers and Appalachian Coals, Inc., at the Columbia hotel here Dec. 14.

Scheduled for the meeting are talks by H. L. Solberg of Purdue university on "The Modern Small Power Plant"; G. G. Zimmerman of the Indiana Service Corp. "Combustion Practices and Experiences with Underfeed Stokers"; and "Engineering in the Small Stoker Industry," by E. C. Webb, engineering service manager for the Iron Fireman Mfg. Co. of Cleveland.

Coal Men 'Go To School' On Automatic Heat

SCHENECTADY, N. Y.—A comprehensive training course covering various phases of automatic heating is being taken by more than 60 anthracite coal merchants and members of their organizations in the upstate New York area.

With meetings on Tuesday and Thursday nights, the event is being conducted by Anthracite Industries, Inc. The training period will extend through November.

Among subjects to be covered are: "Domestic and Commercial Automatic Anthracite Heating," "Merchandising Methods," "Heating and Air-Conditioning Systems," "Draft and Combustion," "Figuring Heating Requirements," "Service Water Equipment," and "Anthracite Promotion and Management."

Memphis Gas Becomes Stoker Dealership

MEMPHIS, Tenn.—Memphis Gas & Electrical Appliance Service Co., formerly specializing as a delivery, installation, and repair service, has been named dealer in Delco-Frigidaire stokers and Coleman gas floor furnaces and oil heaters. George L. Uetz is owner and general manager of the company, and W. H. Towne is office and sales manager.

Asheville Daily Paper Installs 2 Stokers

ASHEVILLE, N. C.—American Coal Co., dealer here for Whiting and Stokol stokers, recently sold two commercial stokers to the Asheville Citizen & Times Co.

Pyramid Metal Moves

CHICAGO—Pyramid Metals Co., manufacturer of Snap-On and decorative mouldings, has moved to a new modern factory at 1335 N. Wells.

Specialty Selling Methods and Survey Approach Lead To Stoker Sales Record

By Henry Knowlton, Jr.

DETROIT—Aggressive specialty selling methods combined with department store and dealer merchandising has enabled James & Roach, Stokol automatic stoker distributor, to exceed a self-set quota of 1,000 stoker sales in metropolitan Detroit this year.

No novice in the automatic heating industry, Norman M. James, head of the distributing organization, began selling oil burners in the Detroit market in 1922. Later he formed the Oil Burning Engineering Co., which sold and installed Williams Oil-O-Matic units.

After some experience in the sale of commercial stokers, Mr. James and his partner, James Roach, Jr., took the Stokol franchise for Detroit in the fall of 1934. Beginning with a two-man organization, the business has grown steadily to its present proportions.

KEEP FIGURES ON TOP

According to Mr. James, the Detroit Stokol business has been built up first by ignoring adverse business conditions, and second by keeping the salesmen aware of the tremendous potential market for automatic heat in the Detroit area, where nearly two million people occupy 235,964 single and two-family homes. With 63,000 automatic heating units in use, including 25,000 oil burners, 20,000 gas burners, and 18,000 stokers, Mr. James believes

steam, hot water, or warm air), what type of fuel is used, what it costs to heat the home for an average winter, the approximate number of rooms and cubical contents of the house, and what interest the owner has in the comfort, convenience, and economy of automatic heat.

Wherever possible the salesman makes an installation survey, so that, on his call-back for a meeting with the homeowner and his wife, he is able to make specific recommendations, quote the price, the terms, and ask for the order.

This selling procedure is followed by James & Roach men through the entire year.

USERS USED

Present Stokol owners, Mr. James says, are a constant source of new prospects, and the salesman is trained to use the owner influence. Frequently the Stokol owner has gone a long way toward pre-selling the prospect, before he is contacted by a salesman.

In addition to residence work, a constant canvass is carried on with apartment owners, schools, churches, hospitals, greenhouses, factories, stores, and other institutions.

Each salesman is encouraged to develop his own selling methods. One salesman has the distinction of having sold 103 stokers in a single year, and 90% of these were sold

They Direct Successful Stoker Sales Plan



NORMAN M. JAMES



JAMES ROACH

that the Detroit market represents one of the best sources of automatic heating business in the country.

The strong retail selling force of James & Roach is supplemented by sales efforts conducted from a permanent Stokol display in the J. L. Hudson Co., and by numerous non-installing dealers in the metropolitan suburbs.

DEPT. STORE DIVISION

The J. L. Hudson Co., one of America's largest department stores, is alone responsible for the sale of several hundred stokers every year to its Detroit customers. Men working on the Hudson sales floor are trained by James & Roach to follow methods which have become successful throughout the organization.

The business is divided into distinct departments with a resulting division of responsibility. Mr. James is in charge of sales, Mr. Roach, of installations, service, and credit; George A. Cox is retail sales manager; V. A. McKechnie, wholesale sales manager; and E. W. Dorn, manager of the air-conditioning department.

With Stokol stokers, the company sells Stokol-Heat units for winter air conditioning, blower-filter units for furnaces, and has recently acquired the Airtemp line of room coolers and self-contained store-cooling equipment.

FORM OF SURVEY

Door-to-door prospecting is the cornerstone of successful selling in the automatic heating industry, Mr. James believes. The salesman starts his day after each regular morning meeting, confining his work to a few city blocks where he calls from door to door, making a survey to find out how the house is heated (whether

with the help of visual selling equipment supplied by the company.

James & Roach have perfected the operation of their installation and service departments to the point where not more than four men are required to maintain day and night service during the heating season, for almost 3,000 stokers. All units sold by the concern are installed and serviced by their own organization.

Advertising and promotion methods employed by the company include 24-sheet billboard posters, local newspaper advertising, direct mail, slide films, and other proven methods. Detroit homeowners are constantly reminded of the advantages of automatic heat with coal, and that Stokol stokers are available through James & Roach and their dealers.

American Air Filter Sets Up Research Fellowship

PITTSBURGH—Establishment of an industrial fellowship in Mellon Institute by the American Air Filter Co., Inc. of Louisville, Ky. has been announced by Dr. Edward R. Weidlein, director of the institute.

The fellowship will investigate broadly materials of value in the construction of filters for air-conditioning systems, Dr. Weidlein says. Aim of the research will be to gain new knowledge to effect all possible improvements in the devices manufactured by the donor.

Dr. Frank F. Rupert, who has been appointed to the incumbency of the fellowship, has been a member of Mellon Institute since 1913, and has been associated with the fellowship on air hygiene since 1935.

'Short-Cut' Premiums of Coal Bad For Stoker Sales, Says Martin

CHICAGO—Commenting on the various "free coal" offers currently used in certain sections of the country to promote the sale of domestic stokers, J. E. Martin, manager of the stoker division of the Link Belt Co., declares that, "we have never directly employed a method of this kind to secure stoker sales, and to the best of our knowledge, none of our dealers have found it desirable to use this type of promotion."

"We believe there are certain items which can be included in a stoker sale as a premium to a customer, such as an electric clock in place of a thermostat, or an automatic draft control; both of these items amounting to an increase of only a few dollars in the dealer's or distributor's cost."

"We do feel that the amount involved in giving away eight tons of coal to sell a stoker was too great a proportion of the purchase price of the unit being sold to be considered a normal premium offer."

"We have found in our experience that any connection which we may have with the coal being furnished for our stokers other than a strictly impartial attitude, results in ill feeling from other coal producers and coal operators toward the use of our product by their customers."

"The opinion of the Federal Housing Authorities seems to be that this type of promotion is unsound financially as it is my understanding that they have declined to discount paper on sales secured by this method."

"We believe that the ultimate can be produced in stoker sales by conscientious effort on the part of the salesman and a planned approach based on the survey, presentation, demonstration, and asking for the order."

"Any short cuts are likely to be more trouble than they are worth in the long run," Mr. Martin concluded.

Georgia Power Dealer List Reports 9-Month Sales

ATLANTA—During the first nine months of this year, dealers on the approved list of Georgia Power Co. sold 6,504 electric refrigerators, 955 ranges, 344 water heaters, 1,749 washers, 252 ironers, and 152 electric water pumps, according to figures compiled by the utility.

Approved list includes dealers who sell either ranges or water heaters, or both. Estimated annual revenue to be derived from dealer appliance sales amounts to \$137,475.

THE BUYER'S GUIDE

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Message

No. 15



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with moisture-proof element, only \$11.00 list.

This splendid valve, manufactured under U. S. Patents Nos. 1,776,401—1,747,958—2,008,663, has removable seats, needles, and power elements. Supplied for SO₂, CH₂Cl, and F12 with 60" capillary tube. Now in the hands of all jobbers.

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NEW YORK HEADQUARTERS

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Just a few blocks from Grand Central Terminal and convenient to the midtown business district, at the Belmont Plaza you're right in the center of things.

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800 spacious well appointed rooms, each with both tub and shower, radio and full length mirror from \$3.00.

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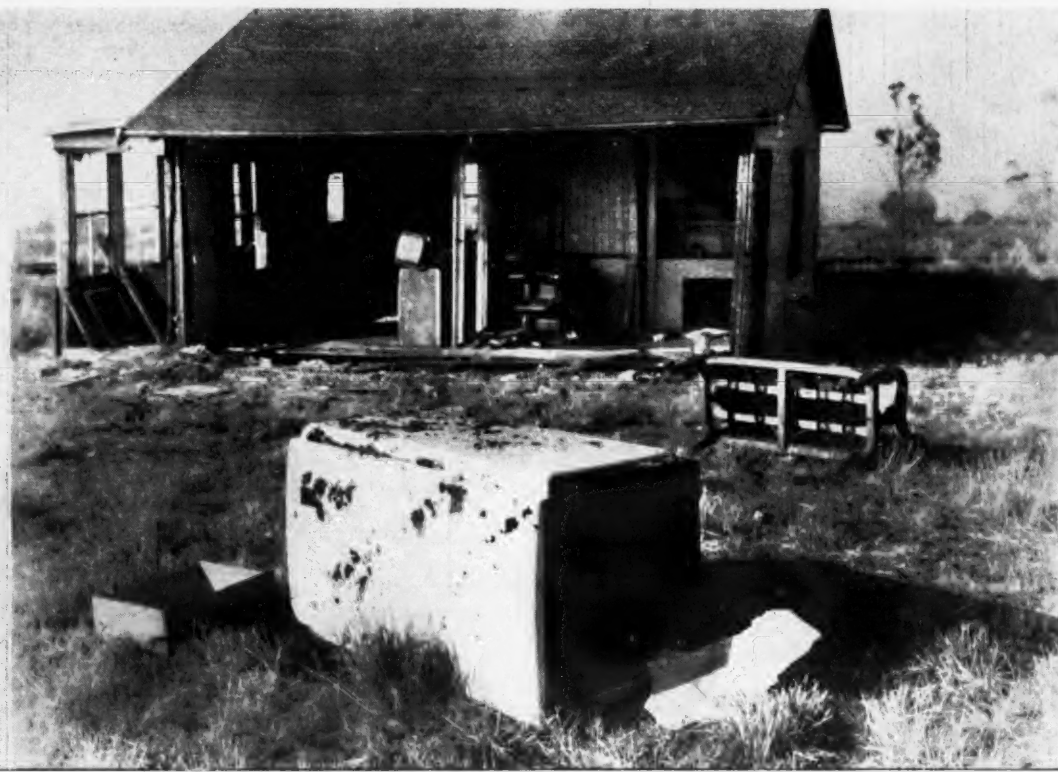
Lexington Ave. at 49th St., New York
John H. Stember, Manager
National Hotel Management Co., Inc.
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Picture Flashes of News Events & New Ideas In the Refrigeration & Appliance World



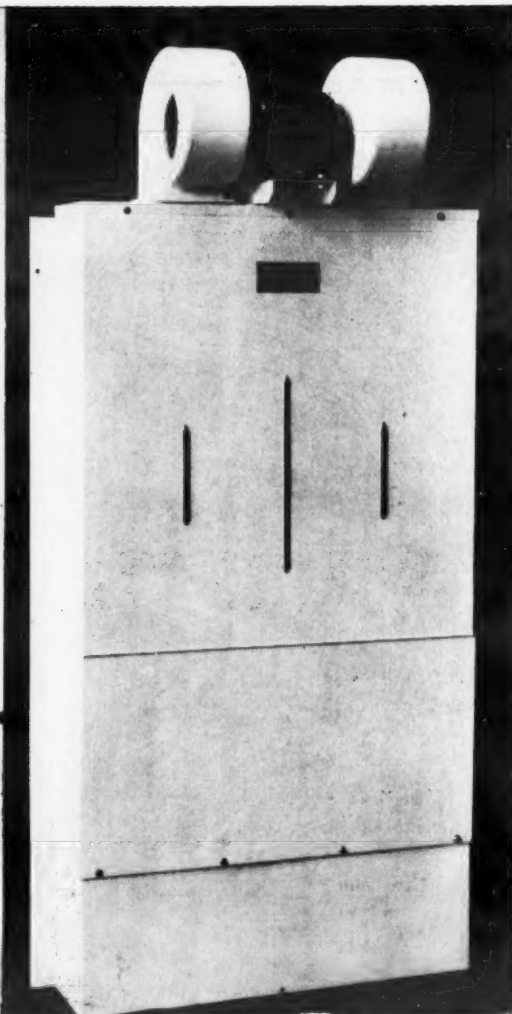
The housewife can iron in the morning at the same table she plays bridge on in the afternoon with the new Thor "Stow-A-Way" kitchen laundry. Ironer fits in the wringer post, and the whole unit can be stored under the sink or in the bathroom, out of the way. The washer can be used as an extra clothes hamper when not in actual service.



This refrigerator, stuck in the mud 1 1/4 miles from where his home once stood, was the only one of his personal belongings Manuel G. Mello of New Bedford, Mass. could find after a flood there. That's not his home—he couldn't find any of it. Despite its rough trip, the unit was in running order, and two alert dealers made a sales story out of the incident. (See story, page 7.)



Doing the week's washing in the kitchen instead of the basement, the housewife is conveniently near telephone, doors, and nursery. This Thor kitchen laundry unit cranks to sink height for filling, wringing, and rinsing operations. Legs are concealed in corners of the cabinet, and the wringer is stored in a recess in back of the washer when not in use.



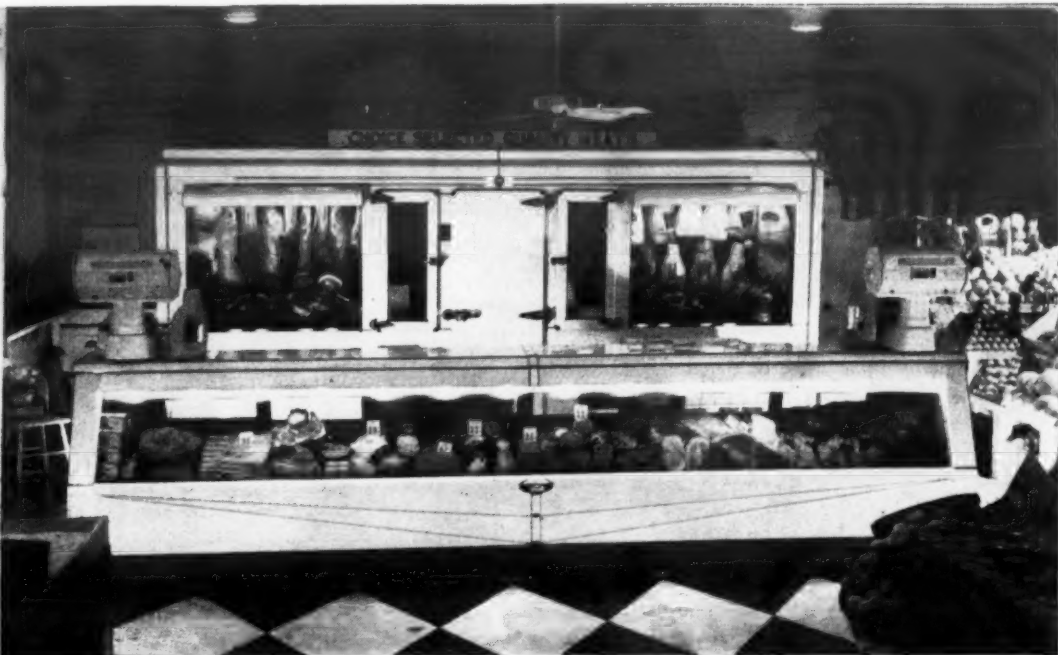
A new unit for commercial refrigeration applications that cools, circulates, and filters the air. This one is designed for installation in a walk-in cooler. Note the streamlined design. (See story on page 9.)



The kitchen is going to figure pretty prominently in the series of pictures built about the cartoon-strip character "Blondie," which is Columbia Pictures' bid for patrons in the current cycle of movies with a "down-to-earth" touch. Here we have Penny Singleton, who will star as "Blondie" in a scene which also stars a Hotpoint all-electric kitchen.



The roomy, attractive showroom floor of a stoker distributorship in Detroit which has sold more than 1,000 stokers. Door-to-door selling and other specialty appliance sales methods are used by James & Roach, the concern which has hung up this remarkable sales record. Note that in addition to various types and sizes of stokers, there are also displays of control boards, power elements, and other parts of the stoker plant. (See story on page 18.)



This might look like just an ordinary installation of a display case and market cooler in a retail meat market, but the installation is distinguished by the fact that both the Fogel display case and the Koch cooler are custom-built to suit the Birmingham, Ala. owner of the store. Both case and cooler are considerably lower than the average equipment, the owner claiming better display is thus obtained, and from the picture it seems he might have something. (Story on page 9.)